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**Subject: Integrated Site Inspection and Removal Assessment Report
Price Metal Refining, Kansas City, Jackson County, Missouri
U.S. EPA Region 7 START 5, Contract No. 68HE0719D0001
Task Order No. 19F0075.001
Task Monitor: Yvonne Smith**

Dear Ms. Smith:

Tetra Tech, Inc. (Tetra Tech) submits the enclosed Integrated Site Inspection and Removal Assessment report regarding the Price Metals site in Kansas City, Missouri. If you have any questions or comments regarding this submittal, please contact the Project Manager at (816) 412-1760.

Sincerely,

A handwritten signature in blue ink that reads 'Lauren Murphy'.

Lauren Murphy
START Project Manager

A handwritten signature in blue ink that reads 'Ted Faile'.

Ted Faile, PG, CHMM
START Program Manager

Enclosures



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INTEGRATED SITE INSPECTION AND REMOVAL ASSESSMENT REPORT

**PRICE METAL REFINING SITE
KANSAS CITY, MISSOURI**

EPA SEMS ID: MON000706445

Superfund Technical Assessment and Response Team (START) 5 Contract

Contract No. 68HE0719D0001, Task Order No. 19F0075.001

Prepared For:

U.S. Environmental Protection Agency
Region 7
Superfund Division
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November 11, 2020

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1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA), Region 7, under authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986, tasked Tetra Tech, Inc., (Tetra Tech) to conduct an Integrated Site Inspection (SI) and Removal Assessment (RA) at the Price Metal Refining site (the site) in Kansas City, Jackson County, Missouri, under Superfund Technical Assessment and Response Team (START) 5 Contract Number 68HE0719D0001, Task Order Number 19F0075.001.

In 2001, an article published in the *American Journal of Public Health* identified Price Metal Refining as an historical secondary lead smelting site that may pose a threat to human health (Eckel, Foster, and Rabinowitz 2001). In 2002, EPA conducted a site visit to Price Metal Refining (1415 Guinotte Avenue) and the nearby Kansas City Smelting & Refining Company (KCS&R) (2223 Guinotte Avenue) sites (Figure 1). In 2012, EPA prepared a Pre-Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) screening assessment checklist/decision form regarding the site, determining that the site should be entered into CERCLIS (now referred to as the Superfund Enterprise Management System [SEMS]) (EPA 2012). The KCS&R site was also entered into CERCLIS (SEMS) in 2012 and assigned the Identification Number MON000706445. The Price Metals site is currently occupied by the active Mid-States Supply, Inc., a pipe, valve, and fittings supply company.

In 2018, Tetra Tech START completed a Preliminary Assessment (PA) of the site to determine whether additional CERCLA investigations would be warranted (Tetra Tech 2019a). START and EPA conducted a site reconnaissance to view the site's current condition, evaluate migration pathways, and determine sampling locations. Because EPA was not able to obtain access to the site, all site reconnaissance activities occurred from the adjoining road and public rights of way. Proposed sampling locations for future investigations were identified during the site visit. The site reconnaissance did not identify any signs of historical smelting operations.

Purposes of this SI and RA were to delineate extent of potential lead contamination in surface soil and to assess exposure threats posed to nearby residents. SI and RA activities accorded with EPA's *Guidance for Performing Site Inspections under CERCLA* (EPA 1992). For this task, an evaluation occurred to assess the relative threat associated with release of hazardous substances at the site, based on information obtained during the SI and previous investigations, including a 2019 RA at the nearby KCS&R site (Tetra Tech 2019b).

2.0 SITE BACKGROUND INFORMATION

This section specifies the site location and describes the site, discusses geology/hydrogeology and hydrology at and in the area of the site, recounts the operational history of the site, describes waste characteristics, and overviews previous regulatory involvement regarding the site.

2.1 SITE LOCATION

The approximately 1.57-acre site is at 1415 Guinotte Avenue, Kansas City, Jackson County, Missouri. The site is in Section 33, Township 50 North, Range 33 West, and is centered at 39.115014 degrees north latitude and 94.565967 degrees west longitude. Elevation at the site is approximately 750 feet above mean sea level (Appendix A, Figure 1). The site is surrounded by residential, commercial, and industrial areas.

2.2 SITE DESCRIPTION

Review of historical fire insurance maps indicated that metal foundry and forging operations at the site had begun as early as 1896 as part of the Western Manufacturing Company, with Price Metal Refining appearing to take ownership sometime between 1909 and 1938 (Tetra Tech 2019a). Documents available through the Missouri Secretary of State offices show an incorporation date of September 11, 1935 (State of Missouri 1935), and dissolution date of January 1, 1986 (State of Missouri 1986). A photo taken by the Jackson County Tax Assessor's office in 1940 shows multiple smelter stacks across the top of the building (Jackson County, Missouri Tax Assessors Office 1940). Satellite imagery available through Google Earth shows that the original structure was demolished between July and December 2002.

The site and east adjoining property are currently owned by BLMP LLC and occupied by Mid-States Supply, Inc. The south and west portions of the site are occupied by two large, metal, rigid-frame, steel buildings. The remaining areas are covered by concrete and used for parking and storage. The site is bounded north by Guinotte Avenue and south by the Union Pacific Railroad. The west adjoining property is a wooded lot owned by the City of Kansas City, Missouri, with Northeast Industrial Trafficway beyond.

In 2010, the U.S. Census Bureau (USCB) estimated the population of Kansas City, Missouri, at 459,787. Estimated population in Jackson County was 674,158 (USCB 2010). Within a 1-mile radius of the site are 4,611 persons and 1,861 housing units. Population density near the site is 1,468 persons per square mile. One irrigation well and 89 groundwater monitoring wells are within a 1-mile radius of the site (Missouri Department of Natural Resources [MDNR] 2018).

Average annual rainfall in Jackson County is approximately 35.75 inches. Of the total annual precipitation, 25 inches, or 70 percent, usually falls from April through September—the growing season for most crops. Thunderstorms can be violent and include strong winds, hail, heavy rain, and tornados. Average seasonal snowfall is 22 inches (U.S. Department of Agriculture [USDA] 1984).

2.3 GEOLOGY AND HYDROGEOLOGY

Area topography features moderately sloping areas, with most coverage (85 percent) by asphalt, concrete, buildings, or other impervious material. Soil is classified as Urban Land-Bottom Land Complex that varies in composition because it has been extensively reshaped by cutting and filling. Areas associated with this soil complex are subject to localized flooding for short periods. The Urban Land-Bottom Land soils of Jackson County extend to 10 or more feet below ground surface (bgs) (USDA 1984).

The northern extents of Jackson County are in the Dissected Till Plains section of the Central Lowland physiographic province (Miller and Vandike 1997). Surficial soils along the Missouri River valley are underlain by quaternary alluvial deposits of clay, sand, and gravel to thickness of 150 feet. Alternating Pennsylvanian limestone and shale strata, indicative of marine transgression-regression sequences, lie beneath the alluvial deposits and gently dip to the northwest (Hasan, Moberly, and Caoile 1988).

The uppermost layers of Pennsylvanian bedrock just south of the Missouri River and near the site belong to the Lower Bronson Subgroup of the Kansas City Group, and consist of the Bethany Falls, Hushpuckney Shale, and Middle Creek Limestone members (U.S. Geological Survey [USGS] 2004).

The site is within the lowland areas of Kansas City, approximately 0.35 mile south of the Missouri River, on unconsolidated alluvial deposits of clay, silt, sand, and gravel belonging to the Late Pleistocene and Holocene Quaternary System. Thicknesses of Missouri River alluvium range from 100 to 150 feet in its reaches in the Kansas City area (Kelly 1996). Depth to groundwater varies, as it is influenced by river stage and recharge from the surrounding uplands, but is typically between 15 and 30 feet. The Missouri River valley aquifers are high-capacity sources of high-quality groundwater (Hasan, Moberly, and Caoile 1988). Kansas City Public Water Services provides municipal water services to the community from surface intakes along the Missouri River. No municipal or registered domestic wells are within 1 mile of the site.

2.4 HYDROLOGY

The site is within the Lower Missouri-Crooked watershed (EPA 2018a). Based on a review of topographic maps, runoff from the site would follow the general topographic gradient northward toward the Missouri River, flowing west to east from its confluence with the Kansas River approximately 2.5 miles to the west. Most runoff would likely be captured by stormwater inlets near the site.

2.5 OPERATIONAL HISTORY AND WASTE CHARACTERISTICS

This section describes operational history of the property and discusses waste characteristics associated with the site.

2.5.1 Operational History

The site and east adjoining property are currently owned by BLMP LLC and occupied by Mid-States Supply, Inc. The south and west portions of the site are occupied by two large, metal, rigid-frame, steel buildings. The remaining areas are covered by concrete and used for parking and storage. A foundry building is depicted at the site property as early as 1896 and appeared to be part of the Western Manufacturing Company business before coming under the ownership of Price Metal Refining between 1909 and 1938 (Sanborn Map & Publishing Co. 1909-1938). Documents available through the Missouri Secretary of State business database show an incorporation date of September 11, 1935 (State of Missouri 1935). Historical site documents provided by EPA regarding the smelter at Price Metal Refining indicate presence of a former furnace to conduct ore processing and lead-pipe casting operations in the northern portion of the site (Tetra Tech 2015).

2.5.2 Waste Characteristics

Based on previous investigations, lead is the primary contaminant of concern at the site.

Lead can be associated with greater than 50 percent of National Priorities List (NPL) sites in the United States. Lead is a naturally occurring, bluish-gray metal found in small amounts in the Earth's crust. Average lead concentration in Jackson County is 40.960 parts per million (ppm) (USGS 2020). It has no characteristic taste or smell. Metallic lead does not dissolve in water and does not burn. Lead has many uses, most importantly in production of some types of batteries. It is also used in ammunition and ceramic glazes. Some chemicals containing lead, such as tetraethyl lead and tetramethyl lead, were once used as gasoline additives to increase octane rating. Other chemicals containing lead are used in paint. Amounts of lead added to paints and ceramic products, caulk, gasoline, and solder have been reduced in recent years

to minimize lead's harmful effects on people and animals. It is used in a large variety of medical equipment (radiation shields, fetal monitors, and surgical equipment). Lead is also used in scientific equipment (circuit boards for computers and other electronic circuitry) and military equipment (jet engine turbine blades, military tracking systems). Most lead used by industry comes from mined ores (some comes from recycled scrap metal or batteries [secondary]). Human activities have spread lead and substances that contain lead to all parts of the environment. Lead is in air, drinking water, rivers, lakes, oceans, and soil (Agency for Toxic Substances and Disease Registry [ATSDR] 2019).

Very little lead is found in most lakes, rivers, or groundwater used to supply the public with drinking water. More than 99% of all publicly supplied drinking water contains less than 0.005 ppm of lead. However, the amount of lead ingested by humans via drinking water can be higher in communities with acidic water supplies. Acidic water facilitates entry into that water of lead in pipes, leaded solder, and brass faucets. Public water treatment systems are now required to use control measures to render water less acidic. Plumbing that contains lead may be in public drinking water systems, and in houses, apartment buildings, and public buildings more than 20 years old (ATSDR 2019).

Effects of lead are the same whether it enters the body through breathing or ingestion. Lead primarily affects the nervous system, both in adults and in children. Long-term exposure to lead in the workplace has resulted in decreased performance in some tests that measure functions of the nervous system. Lead exposure may also cause weakness in fingers, wrists, or ankles. Some studies in humans have suggested that lead exposure may increase blood pressure, but the evidence is inconclusive. Lead exposure may also cause anemia, a low number of blood cells. The connection between occurrence of some of these effects (e.g., increased blood pressure, altered function of the nervous system) and low levels of exposure to lead is not certain. At high levels of exposure, lead can severely damage the brain and kidneys in adults or children. In pregnant women, high levels of exposure to lead may cause miscarriage. High-level exposure in men can damage the organs responsible for sperm production (ATSDR 2019).

2.6 PREVIOUS INVESTIGATIONS

A summary of site involvement and investigations by EPA, including a summary of previous sampling and analytical results, follows:

In 2001, an article published in the *American Journal of Public Health* identified Price Metal Refining as an historical secondary lead smelting site that may pose a threat to human health (Eckel, Foster, and Rabinowitz 2001). EPA evaluated the Price Metal Refining property in 2002, finding no further assessment was warranted at that time. In 2012, EPA prepared a Pre-CERCLIS screening assessment

checklist/decision form regarding the site, determining that the site should be entered into CERCLIS (now referred to as SEMS) (EPA 2012).

2018 Preliminary Assessment

On April 5, 2018, START and EPA conducted a site reconnaissance to view the site's current condition, evaluate migration pathways, and determine sampling locations. Because permission to access the site was not obtained, all site reconnaissance activities occurred from the adjoining road and public rights of way. The site reconnaissance did not identify any signs of historical smelting operations.

Based on findings from the PA, historical secondary smelting operations at the site appeared to present a low risk to human health and the environment in its then-current state. However, the scope of this assessment was limited to site reconnaissance due to lack of access to the site and surrounding properties. Further investigation was recommended to quantify possible metals contamination associated with historical smelting activities via sampling of soils that may have been directly impacted at the site or impacted by airborne lead particles in smelter stack emissions deposited at nearby properties.

2019 Removal Assessment at KCS&R on Guinotte Site

Between July 2017 and September 2018, START conducted RA activities at the KCS&R on Guinotte site (2223 Guinotte Avenue and 410 Park Avenue, approximately 0.5 mile east of the site), where 41 residential properties were sampled. Field screening of samples identified one residential property with at least one cell (excluding the drip zone) containing an average lead concentration exceeding 800 milligrams per kilogram (mg/kg), and 20 residential properties with at least one cell (excluding the drip zone) containing an average lead concentration ranging from 400 to 800 mg/kg. A summary of surface soil screening results from assessed residential properties is in Table B-1 (Appendix B). Figures 2, 3, and 4 show sampling results from and sampling locations at the KCS&R Guinotte site (Appendix A).

Samples KCSR-010, 011, 012, and 028, collected from vacant lots, yielded concentrations of lead in surface soil exceeding the residential soil regional screening level of 400 mg/kg. However, a review of historical fire insurance and aerial maps showed that residential structures once occupied the lots. Thus, elevated concentrations of lead in surface soil at these properties likely are attributable to residual detritus of surface materials from the former structures. Table 1 below lists dates when structures were present at the vacant properties where elevated levels of lead have been detected in soils.

TABLE 1

KCS&R ON GUINOTTE SITE
SUMMARY OF VACANT PROPERTIES WITH ELEVATED LEVELS OF LEAD IN SOILS AND
DATES OF FORMER STRUCTURES

Property ID	Address	Highest Detected Lead Concentration (mg/kg)	Approximate Dates Structure(s) Present at the Property
KCSR-010	██████████ Guinotte Avenue	526	Four dwellings are depicted on Sanborn maps as early as 1896 ^a . Aerial imagery shows that three of the four structures were removed between 1970 and 1990 ^b while the fourth structure was removed between 2003 and 2004 ^c .
KCSR-011	██████ N Wabash Avenue	405	One dwelling is depicted on Sanborn maps as early as 1896 ^a . The addition of a woodworking shop was observed in the map from 1940-1950 ^d . Aerial imagery shows that the woodworking shop was removed between 1955 and 1959 ^b while the dwelling was removed between 1963 and 1969 ^b .
KCSR-012	██████ N Wabash Avenue	439	Two dwellings are depicted on Sanborn maps as early as 1896 ^a and were removed between 1909 and 1938 ^e .
KCSR-028	██████ N Montgall Avenue	661	One dwelling is depicted on Sanborn maps as early as 1896 ^f . Aerial imagery shows that the structure was removed between 1997 and 2001 ^c .

Notes:

- ^a Sanborn Map & Publishing Co. 1896-1907. Missouri Sanborn Fire Insurance Maps. Vol. 2, Sheet 213. Kansas City, Missouri Public Library's Missouri Valley Special Collection. Accessed October 2020. https://kchistory.org/islandora/object/kchistory%3A111812?solr_nav%5Bid%5D=3644f52b0acba2b588cf&solr_nav%5Bpage%5D=0&solr_nav%5Boffset%5D=0
- ^b Nationwide Environmental Title Research, LLC. No Date. Historic Aerials Interactive Map Viewer. Historical satellite imagery showing Northeast Kansas City, Missouri. Accessed October 2020. <https://www.historicaerials.com/viewer>
- ^c Google Earth. 1997, 2001, 2003, 2004. Historical satellite imagery showing Northeast Kansas City, Missouri. Accessed October 2020. <https://earth.google.com/web/>
- ^d Sanborn Map & Publishing Co. 1940-1957. Missouri Sanborn Fire Insurance Maps. Vol. 2, Sheet 281. Kansas City, Missouri Public Library's Missouri Valley Special Collection. Accessed October 2020. https://kchistory.org/islandora/object/kchistory%3A110208?solr_nav%5Bid%5D=b6a3b1e44d60352aa85b&solr_nav%5Bpage%5D=0&solr_nav%5Boffset%5D=1
- ^e Sanborn Map & Publishing Co. 1909-1938. Missouri Sanborn Fire Insurance Maps. Vol. 5, Sheet 607. Kansas City, Missouri Public Library's Missouri Valley Special Collection. Accessed October 2020. https://kchistory.org/islandora/object/kchistory%3A111195?solr_nav%5Bid%5D=808ae1131b5f0efab552&solr_nav%5Bpage%5D=0&solr_nav%5Boffset%5D=0
- ^f Sanborn Map & Publishing Co. 1896-1907. Missouri Sanborn Fire Insurance Maps. Vol. 2, Sheet 216. Kansas City, Missouri Public Library's Missouri Valley Special Collection. Accessed October 2020. https://kchistory.org/islandora/object/kchistory%3A111809?solr_nav%5Bid%5D=f9708f71965d2d225ecc&solr_nav%5Bpage%5D=0&solr_nav%5Boffset%5D=0

In December 2018, START performed additional RA activities at the KCS&R on Guinotte property. Surface soil samples were collected within nine distinct cells and screened via x-ray fluorescence (XRF) spectrometry. Results indicated that five surface soil samples (excluding the drip zones) from this site contained lead at concentrations exceeding the EPA action level for industrial soil of 800 mg/kg (Table B-2, Appendix B).

During October 2019, START collected additional surface soil samples from drip zones of four residential properties initially screened in 2017 and 2018 at the KCS&R on Guinotte site. Drip zones at these properties previously had not been assessed, and at least one cell at each of these properties had been found to contain a lead concentration exceeding 400 mg/kg. The October 2019 investigation revealed that drip zones at each of these four properties contained average concentrations of lead in soil exceeding 400 mg/kg (Table 1, Appendix B).

Spatial analysis of the data did not appear to suggest a correlation between concentrations of lead in soil and proximities to the former smelter. Rather, comparison of drip zone and residential yard surface soil sample data indicated that lead-based paint likely had contributed to lead contamination detected in the surrounding cells.

Based on conclusions from investigations at the KCS&R on Guinotte site, selection of sampling locations near the Price Metal Refining site would focus on properties within 0.25 mile from the site.

3.0 SITE INSPECTION AND REMOVAL ACTIVITIES

During SI and RA field activities between November 2019 and August 2020, START collected 44 surface soil samples at one residential property and five non-residential properties in the vicinity of the Price Metals site to evaluate metals contamination in surface soil from former smelting activities (Figure 5, Appendix A). During August 2020, START and EPA conducted incremental sampling to further assess lead contamination in soils nearest to the site property. SI and RA activities included: (1) generating a scale drawing of each property, (2) dividing each property into distinct cells, (3) collecting a multi-aliquot surface soil sample in each cell, (4) screening the soil samples for lead by use of a Niton XRF spectrometer, and (5) submitting selected soil samples for laboratory analysis. General objectives of the SI and RA were to delineate extent of lead contamination in surface soil and to assess exposure threats posed to nearby residents. START members Lauren Murphy, Ryan Slanczka, Megan Sawyer, and Zach Usher conducted sampling at the site. EPA Region 7 On-Scene Coordinator Yvonne Smith was also on site during a portion of the SI and RA sampling.

3.1 SURFACE SOIL SAMPLING FOR XRF SCREENING

Surface soil screening proceeded in accordance with guidelines established in the *Superfund Lead-Contaminated Residential Sites Handbook* (EPA 2003). The Tetra Tech START field crew, after receiving signed access agreements from each property owner, generated a Property Screening Form and identified cells that would be sampled at each property. Actual sizes of cells were determined in the field based on site features. A composite sample consisting of nine aliquots was collected from each cell. START collected each sample within 0 to 2 inches bgs using a trowel, and placed it in a labeled, sealed plastic bag.

All samples were transported to the START office in Kansas City, MO, along with the Property Screening Forms. Each sample was transferred to a clean pan and allowed to completely air dry. Once dried, the sample was homogenized, passed through a number 10 (2-millimeter) sieve, and then screened for lead by use of an XRF analyzer. Three separate XRF readings were taken from each sample, and the average of these three readings was calculated and recorded on the Property Screening Form (Appendix C).

3.2 SURFACE SOIL SAMPLING FOR XRF CONFIRMATION AND DISPOSAL DETERMINATIONS

Approximately 50 percent of the screened samples were submitted to the EPA Region 7 laboratory for confirmation analysis. The samples also underwent toxicity characteristic leaching procedure (TCLP) analysis for lead to determine the proper destination for disposal of material possibly to be excavated and transported from the site.

4.0 ANALYTICAL DATA SUMMARY

This section summarizes analytical data from surface soil samples collected during the RA near the site. Samples were submitted to the EPA Region 7 laboratory in Kansas City, Kansas, for laboratory confirmation of XRF screening results and TCLP analysis for lead. Field sheets and chain-of-custody records are in Appendix D. Analytical data from the EPA Region 7 laboratory are in Appendix E.

4.1 SURFACE SOIL SAMPLES FOR XRF SCREENING

Between November 2019 and February 2020, START performed SI and RA activities at one residential and five non-residential properties near the site. A summary of surface soil screening results from assessed properties is in Table B-3 (Appendix B). No sample collected from the residential property contained lead at concentration exceeding 400 mg/kg. Field screening of samples identified two non-residential properties (PMR-001 and PMR-002) where at least one cell contained lead at concentration exceeding the EPA non-residential regional screening level (RSL) of 800 mg/kg. At PMR-001, two cells (C-2 and C-3) contained lead levels above the EPA non-residential screening level. At PMR-002, one cell (C-6) contained lead levels above the EPA non-residential screening level. During the November 2019 sampling event, in cell PMR-001, C-2 within the vacant lot directly west of the former smelter property, lead was detected at 7,160 mg/kg in the XRF sample, and 9,420 mg/kg in the laboratory confirmation sample. In cell PMR-002, C-6 located north of the former smelter, lead was reported at 1,706 mg/kg in the XRF sample (no confirmation sample was collected).

During EPA and START August 2020 incremental screening activities, lead was detected at concentrations exceeding 800 mg/kg in only two of 20 sub-cells within PMR-001, C-2—at 978 and 2,008 ppm (mg/kg) (see Figure 6, Appendix A). Incremental sampling was not conducted at PMR-002, C-6 because this cell was located further from the former smelter than other areas where lead was not detected above the RSL. For this reason, the lead is suspected to be from a source other than the smelter.

4.2 SURFACE SOIL SAMPLING FOR XRF CONFIRMATION

Determination of acceptable XRF screening data followed guidelines in Section 9.7 of EPA Method 6200—Field Portable X-Ray Fluorescence Spectrometry for the Determination of Elemental Concentrations in Soil and Sediment (EPA 2007). Approximately 50 percent of surface soil samples were submitted to the EPA Region 7 laboratory in Kansas City, Kansas, for confirmation analysis for lead. XRF data are generally considered valid if a comparison between XRF values and corresponding laboratory results yields a regression coefficient (r^2) of at least 0.7. The r^2 value for data acquired during this project was 0.998; therefore, the remaining XRF readings are considered valid. Correlation data from the 23 soil samples analyzed via the XRF spectrometer and at the EPA Region 7 laboratory are in Table B-3, Appendix B.

5.0 HAZARD RANKING SYSTEM FACTORS

This section discusses sources of contamination and contaminant migration pathways evaluated under the Hazard Ranking System.

5.1 SOURCES OF CONTAMINATION

During removal assessment activities, START collected surface soil samples near the site to determine presence and extent of contamination. Permission to access the site had not been obtained prior to issuance of this report, so no source area samples were collected. However, lead was found in surface soils collected within areas directly adjacent to the site at concentrations above the non-residential RSL of 800 mg/kg and the average concentration of lead in soils (40.96 mg/kg) within Jackson County, Missouri (USGS 2020). Additional screening activities occurred in August 2020 to further assess lead contamination in soils nearest to the site property.

5.2 GROUNDWATER MIGRATION PATHWAY

Jackson County, Missouri is in the West-Central Missouri groundwater province. Groundwater resources of this region are most plentiful in the alluvial deposits of the Kansas and Missouri Rivers. Quaternary alluvium in the area consists of fine-grained silt and clay sediments that grade into coarse to fine sand and silt with depth (Miller and Vandike 1997).

The site is in the lowland areas of Kansas City, approximately 0.35 mile south of the Missouri River, and is on unconsolidated alluvial deposits of clay, silt, sand, and gravel belonging to the Late Pleistocene and Holocene Quaternary System. Thicknesses of Missouri River alluvium range from 100 to 150 feet in its reaches in Kansas City (Kelly 1996). Depth to groundwater varies, as it is influenced by river stage and recharge from the surrounding uplands, but is typically between 15 and 30 feet. The Missouri River valley aquifers are a high-capacity source of high-quality groundwater (Hasan, Moberly, and Caoile 1988). Kansas City Public Water Services provides municipal water services to the community from surface intakes along the Missouri River.

5.2.1 Groundwater Targets

The site is in the downtown area of Kansas City, Jackson County, Missouri. The area is urban and includes commercial, industrial, and residential spaces. According to the U.S. Census, estimated 2010 population of Kansas City, Missouri was 459,787 (USCB 2010).

According to the Safe Drinking Water Information System, 22 public water systems are in Jackson County, Missouri. Fourteen water systems are supplied by groundwater (EPA 2018b). No municipal or registered domestic groundwater wells are within 1 mile of the site.

5.2.2 Groundwater Migration Pathway Conclusions

No groundwater sampling occurred during the SI and RA.

5.3 SURFACE WATER MIGRATION PATHWAY

This section discusses the surface water migration pathway.

5.3.1 Hydrological Setting

Based on a review of topographic maps, runoff from the site would follow the general topographic gradient northward toward the Missouri River, flowing west to east from its confluence with the Kansas River approximately 2.5 miles to the west. Most runoff would likely be captured by stormwater inlets near the site.

5.3.2 Surface Water Targets

Eight water systems listed in the Safe Drinking Water Information System for Jackson County are surface water-based. Kansas City Public Water Services provides municipal water services from surface water intakes along the Missouri River to 460,000 persons in Cass, Clay, Clinton, Jackson, and Platte Counties (EPA 2018b).

Threatened or endangered species known or likely to occur in Jackson County, Missouri, include the gray bat, the Indiana bat, the northern long-eared bat, and the pallid sturgeon (U.S. Fish and Wildlife Service 2018). Presence of these species at the site area has not been verified; nor have critical habitat areas been delineated. Recreational fishing likely occurs at the Missouri River near the site.

5.3.3 Surface Water Migration Pathway Conclusions

No surface water sampling occurred during the SI and RA.

The site is in an urban area that has undergone residential, commercial, and industrial redevelopment since smelting activities ceased. Concrete, asphalt, and buildings provide an impervious ground cover on the

site and in much of the surrounding area. Most runoff would likely be captured by stormwater inlets near the site, so the likelihood of exposure is low.

5.4 SOIL EXPOSURE AND AIR MIGRATION PATHWAY

This section discusses the soil exposure and air migration pathways.

5.4.1 Physical Conditions

Topography of the site is moderately sloping and mostly covered (85%) by asphalt, concrete, buildings, or other impervious material. Soil is classified as Urban Land-Bottom Land Complex and varies in composition because it has been extensively reshaped by cutting and filling. Areas associated with this soil complex are subject to localized flooding for short periods. The Urban Land-Bottom Land soils of Jackson County extend to 10 or more feet bgs (USDA 1984).

5.4.2 Soil and Air Targets

The site is in the downtown area of Kansas City, Jackson County, Missouri, which includes residential, commercial, and industrial properties. Approximately 4,611 persons and 1,861 housing units are within a 1-mile radius of the site (USCB 2010). Nearest the site, indigent transient groups have occasionally occupied the west adjoining wooded lot. Additional targets of concern include tenants of the 219-unit Guinotte Manor Apartments constructed in 2001 following demolition of the previous Guinotte Manor housing project. The Kansas City Department of Housing and Urban Development owns and manages this 40-acre property, approximately 500 feet south of the site.

5.4.3 Soil and Air Migration Pathway Conclusions

The site is in an urban area that has undergone residential, commercial, and industrial redevelopment since smelting activities ceased. Concrete, asphalt, and buildings provide an impervious ground cover on the site and in much of the surrounding area. Surface soil samples collected at the south adjacent Guinotte Manor (PMR-004, 005, 006, 007, 008, and 009) contained lead concentrations well below the residential RSL of 400 mg/kg. Although lead concentrations exceeded the non-residential RSL of 800 mg/kg in surface soil samples collected within localized areas in the undeveloped wooded lots directly adjacent to the site, likelihood of exposure is low because these areas are typically unoccupied and undeveloped (Figure 5, Appendix A).

6.0 EMERGENCY RESPONSE CONSIDERATIONS

The National Contingency Plan [40 *Code of Federal Regulations* [CFR] 300.415(b) (2)] authorizes EPA to consider emergency response actions at a facility posing an imminent threat to human health or the environment. Concentrations of lead in soils exceeded the non-residential regional screening level of 800 mg/kg at the vacant property directly adjacent to the site. However, the likelihood of exposure is low because these areas are typically unoccupied and undeveloped. Therefore, a referral to EPA Region 7 for emergency response activities based on findings from this SI and RA is not warranted.

7.0 SUMMARY

The Price Metal Refining site (the site) is in downtown Kansas City, Missouri. In 2001, Price Metal Refining was identified as an historical secondary smelter site that may pose a threat to human health. In 2002, EPA conducted a site visit to Price Metal Refining and determined that no further assessment was warranted at that time. In 2012, an EPA-prepared, Pre-CERCLIS screening assessment of the site on a checklist/decision form concluded that the site should be entered into CERCLIS and assigned the Identification Number MON000706445.

In April 2018, START conducted a PA at the site. Based on findings from the PA, historical secondary smelting operations at the site appeared to present a low risk to human health and the environment in the site's current state. However, the scope of this assessment was limited to site reconnaissance due to lack of access to the site and surrounding properties. Further investigation was recommended to quantify possible metals contamination associated with historical smelting activities.

Between November 2019 and August 2020, START conducted SI and RA field activities at the site. START collected 44 surface soil samples at one residential and five non-residential properties in the vicinity of the site to evaluate metals contamination in surface soil from former smelting activities. Field screening of samples identified two undeveloped, non-residential properties with at least one cell containing lead at a concentration exceeding the applicable 800 mg/kg RSL. No sample collected from a residential yard was found to contain lead levels exceeding the EPA residential RSL of 400 mg/kg. Based on the sampling data, the risk of exposure to soil contaminated with lead associated with the site is low.

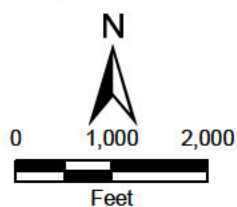
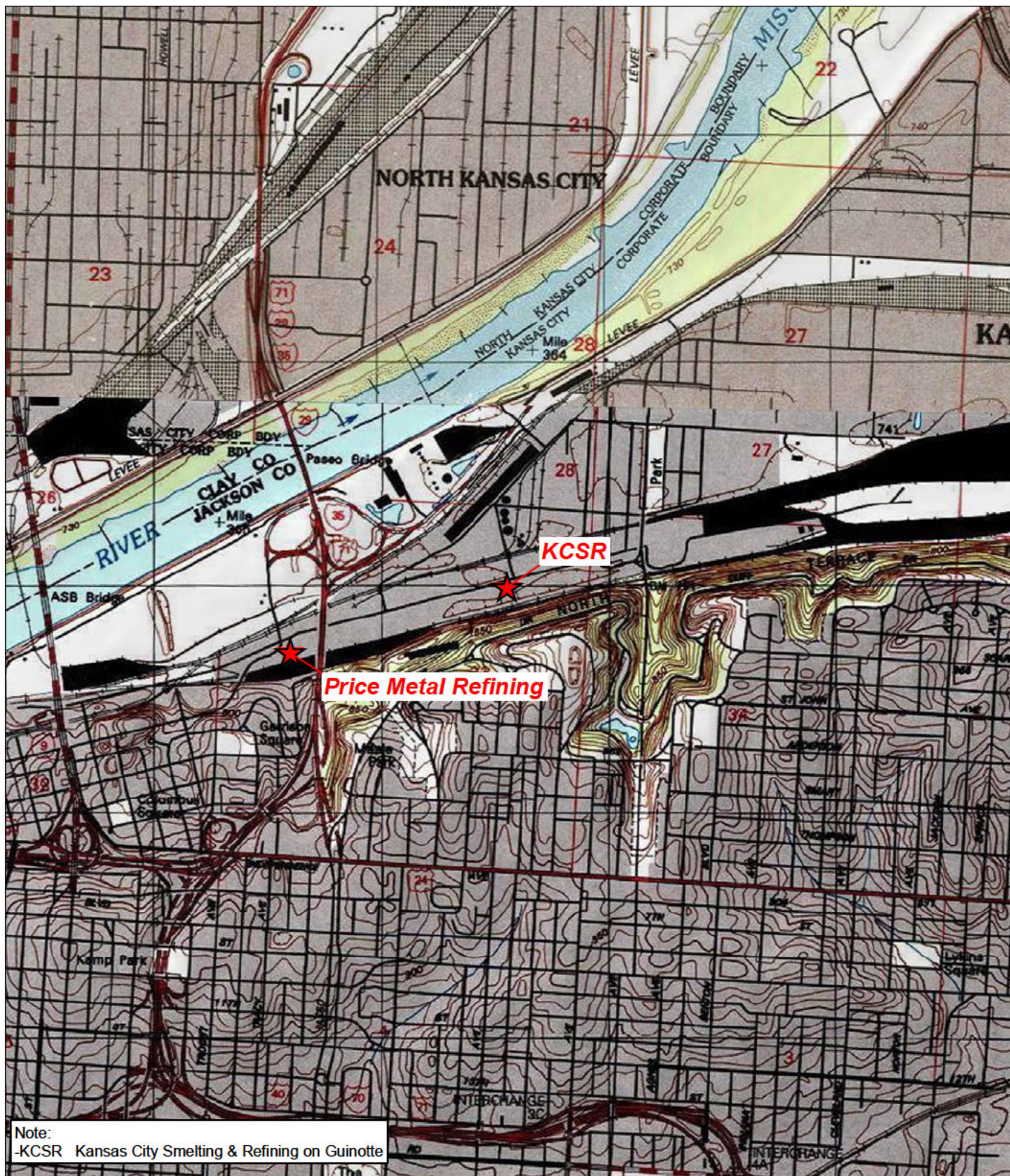
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APPENDIX A

FIGURES

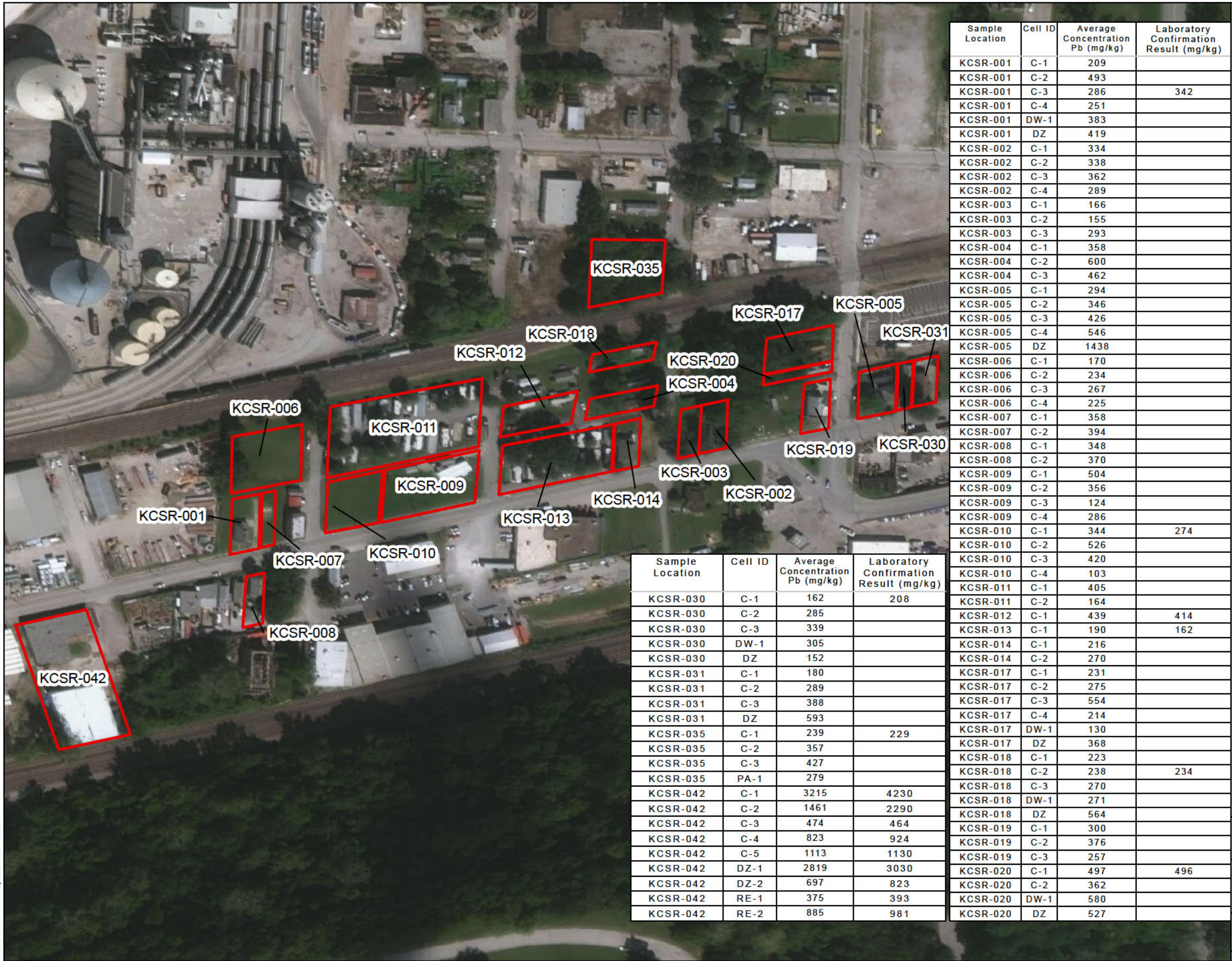


Price Metal Refining
 Kansas City, Missouri

Figure 1
 Site Location Map



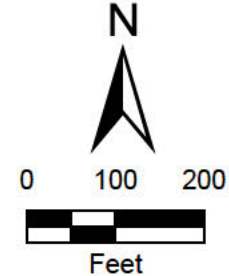
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Sample Location	Cell ID	Average Concentration Pb (mg/kg)	Laboratory Confirmation Result (mg/kg)
KCSR-030	C-1	162	208
KCSR-030	C-2	285	
KCSR-030	C-3	339	
KCSR-030	DW-1	305	
KCSR-030	DZ	152	
KCSR-031	C-1	180	
KCSR-031	C-2	289	
KCSR-031	C-3	388	
KCSR-031	DZ	593	
KCSR-035	C-1	239	229
KCSR-035	C-2	357	
KCSR-035	C-3	427	
KCSR-035	PA-1	279	
KCSR-042	C-1	3215	4230
KCSR-042	C-2	1461	2290
KCSR-042	C-3	474	464
KCSR-042	C-4	823	924
KCSR-042	C-5	1113	1130
KCSR-042	DZ-1	2819	3030
KCSR-042	DZ-2	697	823
KCSR-042	RE-1	375	393
KCSR-042	RE-2	885	981

Sample Location	Cell ID	Average Concentration Pb (mg/kg)	Laboratory Confirmation Result (mg/kg)
KCSR-001	C-1	209	
KCSR-001	C-2	493	
KCSR-001	C-3	286	342
KCSR-001	C-4	251	
KCSR-001	DW-1	383	
KCSR-001	DZ	419	
KCSR-002	C-1	334	
KCSR-002	C-2	338	
KCSR-002	C-3	362	
KCSR-002	C-4	289	
KCSR-003	C-1	166	
KCSR-003	C-2	155	
KCSR-003	C-3	293	
KCSR-004	C-1	358	
KCSR-004	C-2	600	
KCSR-004	C-3	462	
KCSR-005	C-1	294	
KCSR-005	C-2	346	
KCSR-005	C-3	426	
KCSR-005	C-4	546	
KCSR-005	DZ	1438	
KCSR-006	C-1	170	
KCSR-006	C-2	234	
KCSR-006	C-3	267	
KCSR-006	C-4	225	
KCSR-007	C-1	358	
KCSR-007	C-2	394	
KCSR-008	C-1	348	
KCSR-008	C-2	370	
KCSR-009	C-1	504	
KCSR-009	C-2	356	
KCSR-009	C-3	124	
KCSR-009	C-4	286	
KCSR-010	C-1	344	274
KCSR-010	C-2	526	
KCSR-010	C-3	420	
KCSR-010	C-4	103	
KCSR-011	C-1	405	
KCSR-011	C-2	164	
KCSR-012	C-1	439	414
KCSR-013	C-1	190	162
KCSR-014	C-1	216	
KCSR-014	C-2	270	
KCSR-017	C-1	231	
KCSR-017	C-2	275	
KCSR-017	C-3	554	
KCSR-017	C-4	214	
KCSR-017	DW-1	130	
KCSR-017	DZ	368	
KCSR-018	C-1	223	
KCSR-018	C-2	238	234
KCSR-018	C-3	270	
KCSR-018	DW-1	271	
KCSR-018	DZ	564	
KCSR-019	C-1	300	
KCSR-019	C-2	376	
KCSR-019	C-3	257	
KCSR-020	C-1	497	496
KCSR-020	C-2	362	
KCSR-020	DW-1	580	
KCSR-020	DZ	527	

Legend
[Red Box] Parcel boundary
ID Identification
Pb Lead
mg/kg Milligram per kilogram
KCSR Kansas City Smelting & Refining on Guinotte



Price Metal Refining
Kansas City, Missouri

Figure 2
KCSR Sample Results South - A





Legend

Sample location

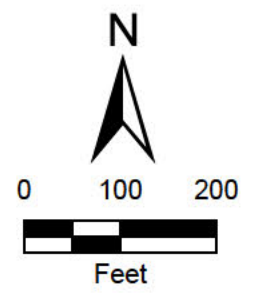
ID Identification

Pb Lead

mg/kg Milligram per kilogram

KCSR Kansas City Smelting & Refining on Guinotte

Sample Location	Cell ID	Average Concentration Pb (mg/kg)	Laboratory Confirmation Result (mg/kg)
KCSR-043	-	37	35.8
KCSR-044	-	40	34.1
KCSR-045	-	87	69.2
KCSR-046	-	58	39.2

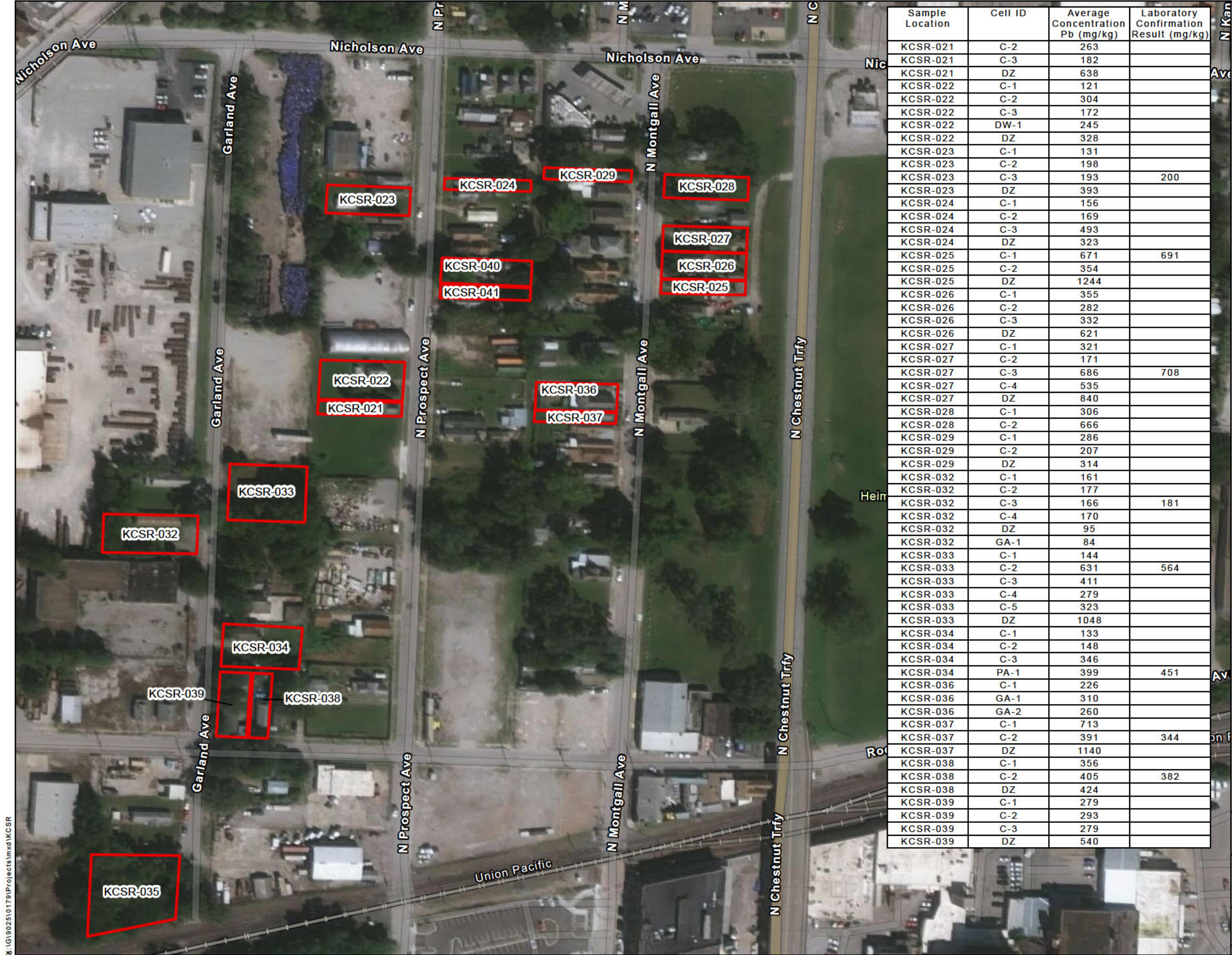


Price Metal Refining
Kansas City, Missouri

Figure 3
KCSR Sample Results South - B



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Sample Location	Cell ID	Average Concentration Pb (mg/kg)	Laboratory Confirmation Result (mg/kg)
KCSR-021	C-2	263	
KCSR-021	C-3	182	
KCSR-021	DZ	638	
KCSR-022	C-1	121	
KCSR-022	C-2	304	
KCSR-022	C-3	172	
KCSR-022	DW-1	245	
KCSR-022	DZ	328	
KCSR-023	C-1	131	
KCSR-023	C-2	198	
KCSR-023	C-3	193	200
KCSR-023	DZ	393	
KCSR-024	C-1	156	
KCSR-024	C-2	169	
KCSR-024	C-3	493	
KCSR-024	DZ	323	
KCSR-025	C-1	671	691
KCSR-025	C-2	354	
KCSR-025	DZ	1244	
KCSR-026	C-1	355	
KCSR-026	C-2	282	
KCSR-026	C-3	332	
KCSR-026	DZ	621	
KCSR-027	C-1	321	
KCSR-027	C-2	171	
KCSR-027	C-3	686	708
KCSR-027	C-4	535	
KCSR-027	DZ	840	
KCSR-028	C-1	306	
KCSR-028	C-2	666	
KCSR-029	C-1	286	
KCSR-029	C-2	207	
KCSR-029	DZ	314	
KCSR-032	C-1	161	
KCSR-032	C-2	177	
KCSR-032	C-3	166	181
KCSR-032	C-4	170	
KCSR-032	DZ	95	
KCSR-032	GA-1	84	
KCSR-033	C-1	144	
KCSR-033	C-2	631	564
KCSR-033	C-3	411	
KCSR-033	C-4	279	
KCSR-033	C-5	323	
KCSR-033	DZ	1048	
KCSR-034	C-1	133	
KCSR-034	C-2	148	
KCSR-034	C-3	346	
KCSR-034	PA-1	399	451
KCSR-036	C-1	226	
KCSR-036	GA-1	310	
KCSR-036	GA-2	260	
KCSR-037	C-1	713	
KCSR-037	C-2	391	344
KCSR-037	DZ	1140	
KCSR-038	C-1	356	
KCSR-038	C-2	405	382
KCSR-038	DZ	424	
KCSR-039	C-1	279	
KCSR-039	C-2	293	
KCSR-039	C-3	279	
KCSR-039	DZ	540	

Legend

- Parcel boundary
- ID Identification
- Pb Lead
- mg/kg Milligram per kilogram
- KCSR Kansas City Smelting & Refining on Guinotte

0 90 180

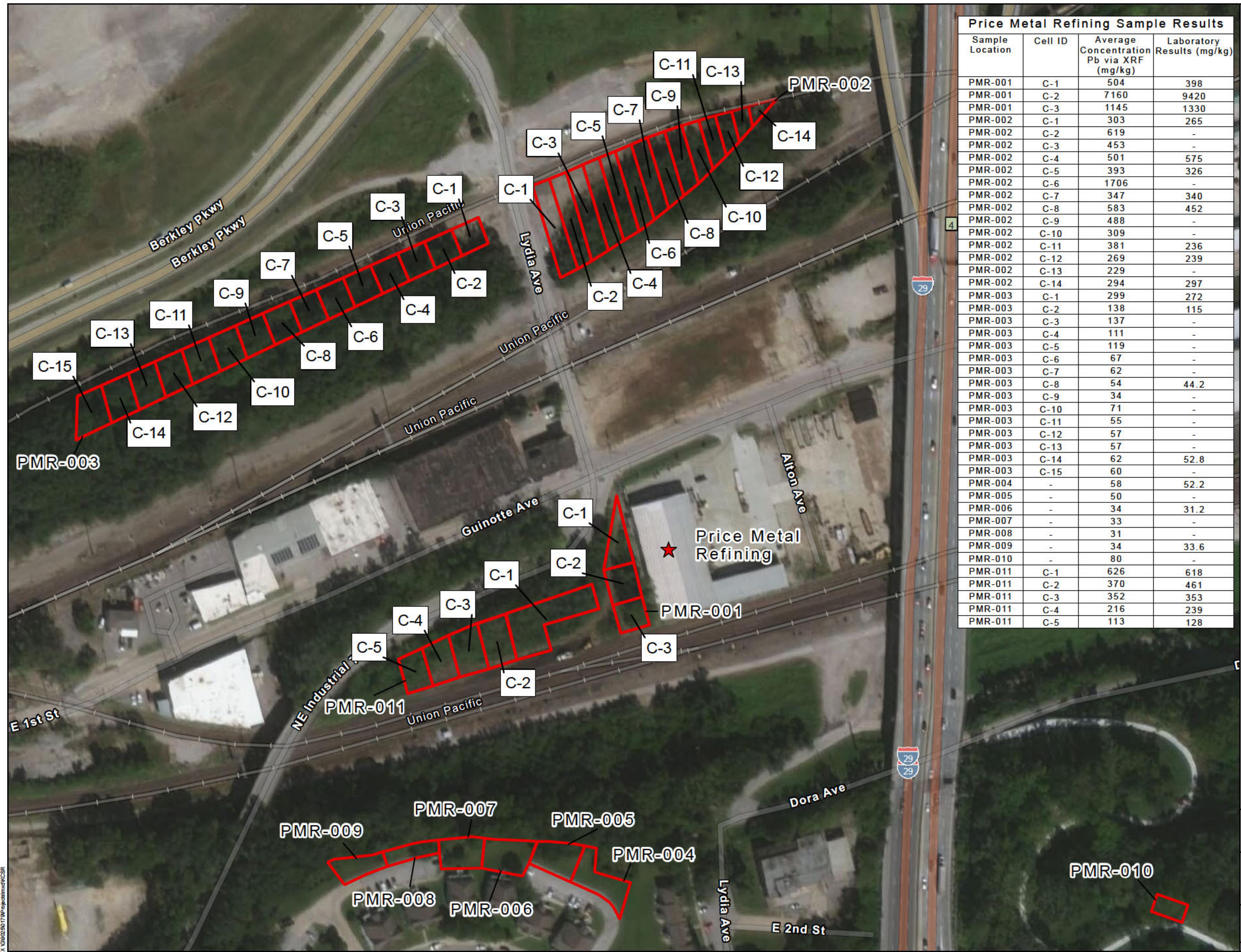
Feet

Price Metal Refining
Kansas City, Missouri

Figure 4
KCSR Sample Results North

TETRA TECH

Date: 3/20/2020
Drawn By: Rose Micke
Project No: 103X903019F0075.001



Legend

- ★ Site location
- Sample location
- ID Identification
- Pb Lead
- mg/kg Milligram per kilogram
- KCSR Kansas City Smelting & Refining on Guinotte
- XRF X-ray fluorescence

0 100 200

Feet

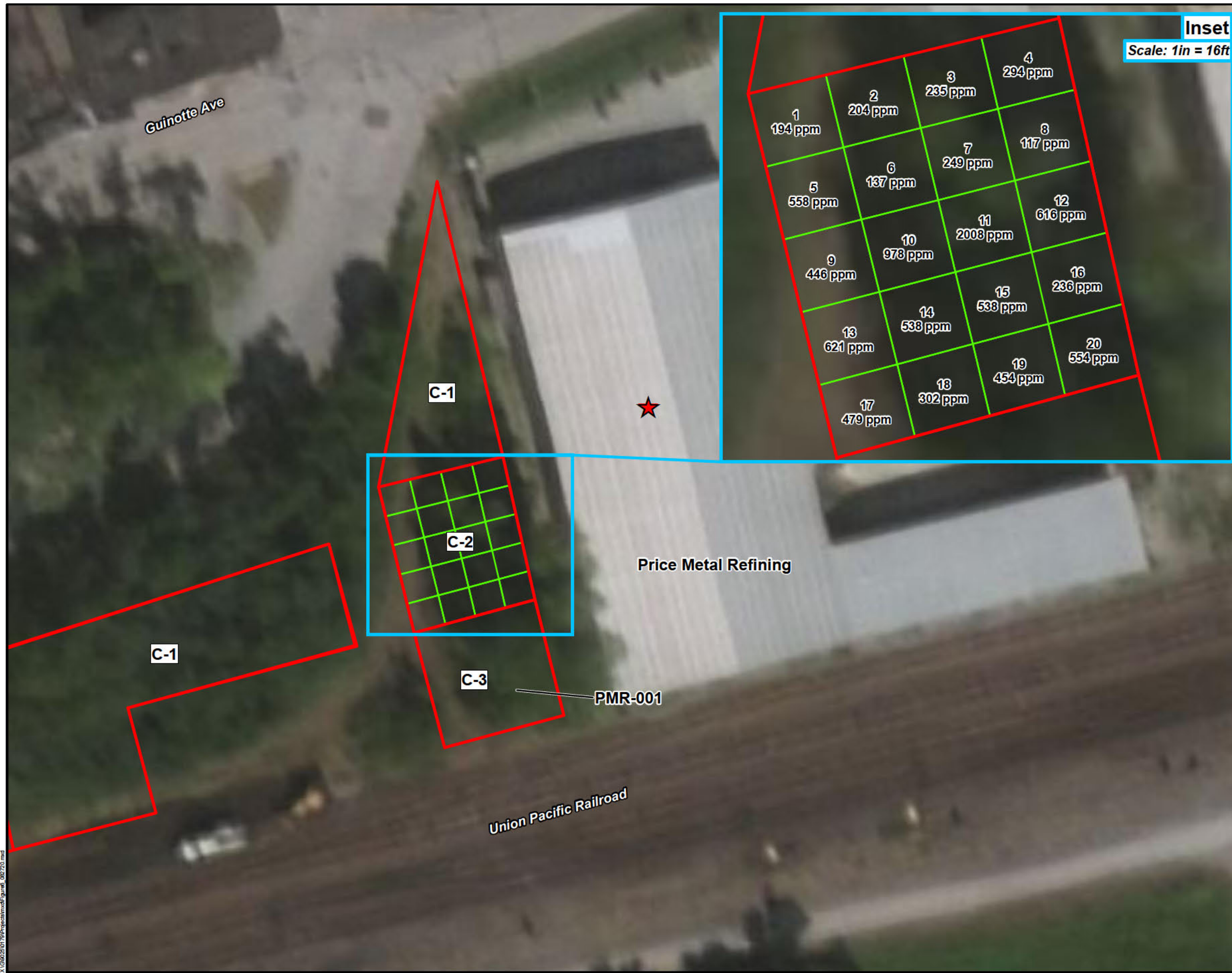
Source: ArcGIS Online, World Imagery, 2017.

Price Metal Refining
Kansas City, Missouri

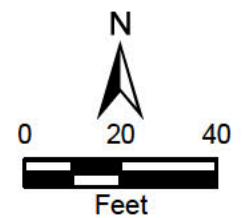
Figure 5
Price Metal Refining
Sample Locations and Results

Tt TETRA TECH

Date: 1/20/2020
Drawn By: Rose Micke
Project No: 103X903019F0075.001



- Legend**
- ★ Site location
 - Sample location
 - Incremental screening cell (with Cell ID and Avg XRF Pb result)
 - Avg Average
 - ID Identification
 - Pb Lead
 - ppm Parts per million
 - XRF X-ray fluorescence



Source: Esri, ArcGIS Online, World Imagery, 2019

Price Metal Refining
Kansas City, Missouri

Figure 6
XRF Screening Results Map



APPENDIX B

TABLES

SUMMARY OF ASSESSED PROPERTIES

TABLE B-1

SUMMARY OF XRF AND LABORATORY CONFIRMATION SAMPLE RESULTS KCS&R ON GUINOTTE SITE – KANSAS CITY, MISSOURI

Property ID	Address	Greatest Lead Concentration (mg/kg)	Average Lead Concentration from Drip Zone (mg/kg)	Date(s) Screened
KCSR-001	█ Guinotte Avenue	493	419	8/1/2017 10/23/2019
KCSR-002	█ Guinotte Avenue	362	NS ¹	8/1/17
KCSR-003	█ Guinotte Avenue	293	NS ¹	8/1/17
KCSR-004	█ N Garland Avenue	600	NS ²	8/1/17
KCSR-005	█ Guinotte Avenue	546	1,438	8/1/2017 10/23/2019
KCSR-006	Unassigned (lot north of 2318 Guinotte Avenue)	267	NS ³	8/1/17
KCSR-007	█ Guinotte Avenue	394	NS ¹	8/1/17
KCSR-008	█ Guinotte Avenue	370	NS ¹	8/1/17
KCSR-009	█ Guinotte Avenue	504	NS ²	8/2/17
KCSR-010	█ Guinotte Avenue	526	NS ³	8/2/17
KCSR-011	█ Wabash Avenue	405	NS ³	8/2/17
KCSR-012	█ N Wabash Avenue	439	NS ³	8/2/17
KCSR-013	█ Guinotte Avenue (mobile home lot)	190	NS ³	8/2/17
KCSR-014	█ Guinotte Avenue (house)	270	NS ¹	8/2/17
KCSR-015	Nicholson Park (background)	31	NA	8/2/17
KCSR-016	Berkley Riverfront Park (background)	183	NA	8/2/17
KCSR-017	█ N Prospect Avenue	554	368	9/6/18
KCSR-018	█ N Garland Avenue	271	564	9/11/18
KCSR-019	█ Guinotte Avenue	376	NS ⁴	9/11/18
KCSR-020	█ N Prospect Avenue	580	527	9/11/18
KCSR-021	█ N Prospect Avenue	270	638	9/11/18
KCSR-022	█ N Prospect Avenue	304	328	9/11/18
KCSR-023	█ N Prospect Avenue	198	393	9/11/18
KCSR-024	█ N Prospect Avenue	493	323	9/11/18
KCSR-025	█ N Montgall Avenue	671	1,244	9/11/2018 10/23/2019
KCSR-026	█ N Montgall Avenue	355	621	9/11/18
KCSR-027	█ N Montgall Avenue	686	840	9/11/2018 10/23/2019
KCSR-028	█ N Montgall Avenue	666	NS ³	9/11/18
KCSR-029	█ N Montgall Avenue	286	314	9/11/18
KCSR-030	█ Guinotte Avenue	339	152	9/12/18
KCSR-031	█ Guinotte Avenue	388	593	9/12/18
KCSR-032	█ N Garland Avenue	177	95	9/12/18
KCSR-033	█ N Garland Avenue	631	1,048	9/12/18
KCSR-034	█ N Garland Avenue	346	NS ⁴	9/12/18
KCSR-035	█ N Wabash Avenue	427	NS ⁵	9/12/18
KCSR-036	█ N Montgall Avenue	317	NS ⁴	9/12/18
KCSR-037	█ N Montgall Avenue	713	1,140	9/12/18
KCSR-038	█ Rochester Avenue	405	424	9/12/18
KCSR-039	█ Rochester Avenue	293	540	9/12/18
KCSR-040	█ N Prospect Drive	808	1,625	9/12/18
KCSR-041	█ N Prospect Drive	457	821	9/12/18

Notes:

Bolded result indicates an average lead concentration greater than 400 mg/kg.

ID	Identification
mg/kg	Milligrams per kilogram
NA	Not applicable
NS	Not sampled
1	Greatest lead concentration <400 mg/kg. Not selected for additional sampling
2	Unable to establish contact with property owner for additional sampling
3	No structures present, empty lot
4	Structure bordered by concrete or other impenetrable cover
5	Property owner declined further sampling

TABLE B-2

FORMER KCS&R FACILITY & BACKGROUND SAMPLE RESULTS
KCS&R ON GUINOTTE SITE – KANSAS CITY, MISSOURI

Sample ID	Cell ID	Pb Lab (mg/kg)	Pb XRF (mg/kg)	Date Screened
Former KCS&R Facility				
KCSR-042	C-1	3,215	4,230	12/19/2018
KCSR-042	DZ-1	2,819	3,030	12/19/2018
KCSR-042	RE-1	375	393	12/19/2018
KCSR-042	C-4	823	924	12/19/2018
KCSR-042	C-5	1,113	1,130	12/19/2018
KCSR-042	RE-2	885	981	12/19/2018
KCSR-042	DZ-2	697	823	12/19/2018
KCSR-042	C-3	474	464	12/19/2018
KCSR-042	C-2	1,461	2,290	12/19/2018
Kessler Park (Background)				
KCSR-043	NA	36	37	11/25/2019
KCSR-044	NA	34	40	11/25/2019
KCSR-045	NA	69	87	11/25/2019
KCSR-046	NA	39	58	11/25/2019

Notes:

$$r^2 = 0.970607$$

Bolded result indicates an average lead concentration greater than 800 mg/kg.

ID Identification
mg/kg Milligrams per kilogram
NA Not applicable
Pb Lead
 r^2 Regression coefficient
XRF X-ray fluorescence

TABLE B-3

SUMMARY OF XRF AND LABORATORY CONFIRMATION SAMPLE RESULTS
PRICE METAL REFINING SITE – KANSAS CITY, MISSOURI

Property ID	Sample Number	Cell ID	Address	Property Type	Pb Lab (mg/kg)	Pb XRF (mg/kg)
PMR-001	8386-1	C-1	Unassigned address, west adjacent to site property	Non-residential	398	504
	8386-2	C-2			9,420	7,160
	8386-3	C-3			1,330	1,145
PMR-002	8386-20	C-1	■■■■ N Lydia Avenue	Non-residential	265	303
		C-2			-	619
		C-3			-	453
	8386-10	C-4			575	501
	8386-7	C-5			326	393
		C-6			-	1,706
	8386-12	C-7			340	347
	8386-8	C-8			452	583
		C-9			-	488
		C-10			-	309
	8386-9	C-11			236	381
	8386-11	C-12			239	269
		C-13			-	229
	8386-21	C-14			297	294
PMR-003	8386-4	C-1	■■■■ N Lydia Avenue	Non-residential	272	299
	8386-22	C-2			115	138
		C-3			-	137
		C-4			-	111
		C-5			-	119
		C-6			-	67
		C-7			-	62
	8386-5	C-8			44	54
		C-9			-	34
		C-10			-	71
		C-11			-	55
		C-12			-	57
		C-13			-	57
	8386-6	C-14			53	62
		C-15			-	60
PMR-004	8386-15	-	■■■■ E 4th Street, Apartments 209 & 211	Residential	52	58
PMR-005		-	■■■■ E 4th Street, Apartments 205 & 207	Residential	-	50
PMR-006	8386-13	-	■■■■ E 4th Street, Apartments 201 & 203	Residential	31	34
PMR-007		-	■■■■ E 4th Street, Apartments 200 & 202	Residential	-	33
PMR-008		-	■■■■ E 4th Street, Apartments 204 & 206	Residential	-	31
PMR-009	8386-14	-	■■■■ E 4th Street, Apartments 208 & 210	Residential	34	34
PMR-010*		-	■■■■ Paseo (Kessler Park)	Residential	-	80
PMR-011	8486-1	C-1	■■■■ NE Trafficway	Non-residential	618	626
	8486-2	C-2			461	370
	8486-3	C-3			353	352
	8486-4	C-4			239	216
	8486-5	C-5			128	113

Notes:

r² = 0.997759

Bolded result indicates an average lead concentration greater than 400 mg/kg.

- *

mg/kg

Pb

ID

r²

XRF
- Background Sample

Milligrams per kilogram

Lead

Identification Number

Regression coefficient

X-ray fluorescence

APPENDIX C

PROPERTY SCREENING FORMS AND ACCESS AGREEMENTS



KCS & R on Guinotte

CONSENT TO ACCESS FOR ENVIRONMENTAL INVESTIGATION

I have read and agree to the terms and conditions presented below on this form. I understand that this is an agreement granting permission to the United States Environmental Protection Agency (USEPA), its authorized representatives, and the Missouri Department of Natural Resources (MDNR) to enter and perform certain environmental response activities upon the Site described below

Property Location or Address: 3 properties located in Kansas City, MO:
[REDACTED] N Lydia Ave, Parcel ID # 12-720-03-01-00-0-00-000;
[REDACTED] N Lydia Ave, Parcel ID # 12-720-04-01-00-0-00-000; and
[REDACTED] NE Industrial Trfy, Parcel ID# 12-720-13-07-00-0-00-000.

Property Access Granted By:

[REDACTED]
(Please Print Name)

[REDACTED]
(Authorized Representative Signature)

4/1/19
(Date)

TERMS AND CONDITIONS

RIGHT OF ENTRY: The property owner consents to and authorizes USEPA, its authorized representatives, and MDNR, to enter and perform certain environmental response activities upon the premises in accordance with Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9604.

SCOPE OF ACCESS: The environmental response actions to be performed on said property may include the following activities:

- Locating equipment and machinery on-site for purposes of collecting environmental samples; and
- Obtaining environmental samples from the property.

RELEASE OF SAMPLING DATA: In accordance with Section 104(e)(7) of CERCLA, I consent to EPA releasing to the public all analytical results of any samples that EPA collects on my property, as identified by the property address.

RESTORATION OF PROPERTY: I recognize that the performance of such actions may require some disturbance of the property and that EPA will attempt to minimize such disturbance, and that areas of disturbance will be restored as nearly as possible to prior condition by EPA, subject to the availability of appropriated funds.

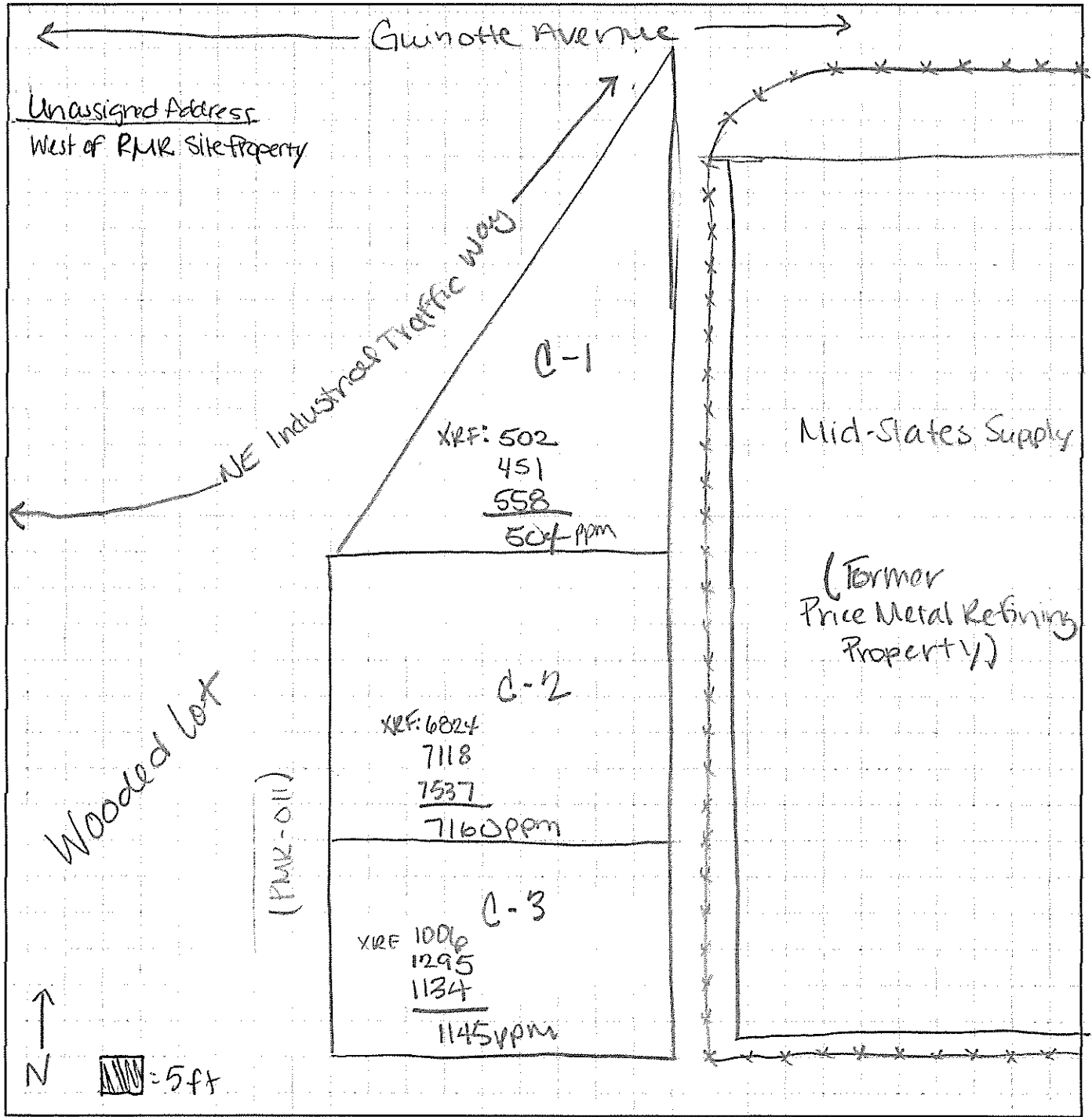
LIABILITY: I understand that EPA requires its contractors to maintain comprehensive vehicle liability insurance, and comprehensive general liability insurance for bodily injury, death, and loss or damage to property or third persons arising from their activities. I also understand that EPA's liability for damages to the property or injuries to persons which result from or are caused by its activities on the property shall be to the extent permitted by the Federal Tort Claims Act (28 U.S.C. §§ 1346(b), 2671 - 2680) and the Federal

Price Metal Refining, Property Screening Form

EPA Site #: PMR- 001 Date of Access: 11/1/2019 Date of Screening: 11/5/2019
 Screening Results: XRF I.D.: _____ Date: 11/8/2019 Operator: TR

Average XRF Pb Screening Results (ppm)

Cell 1: <u>504</u>	Cell 5: _____	Cell 9: _____	Cell 13: _____
Cell 2: <u>7160</u>	Cell 6: _____	Cell 10: _____	Cell 14: _____
Cell 3: _____	Cell 7: _____	Cell 11: _____	Cell 15: _____
Cell 4: _____	Cell 8: _____	Cell 12: _____	Cell 16: _____



Price Metal Refining, Property Screening Form

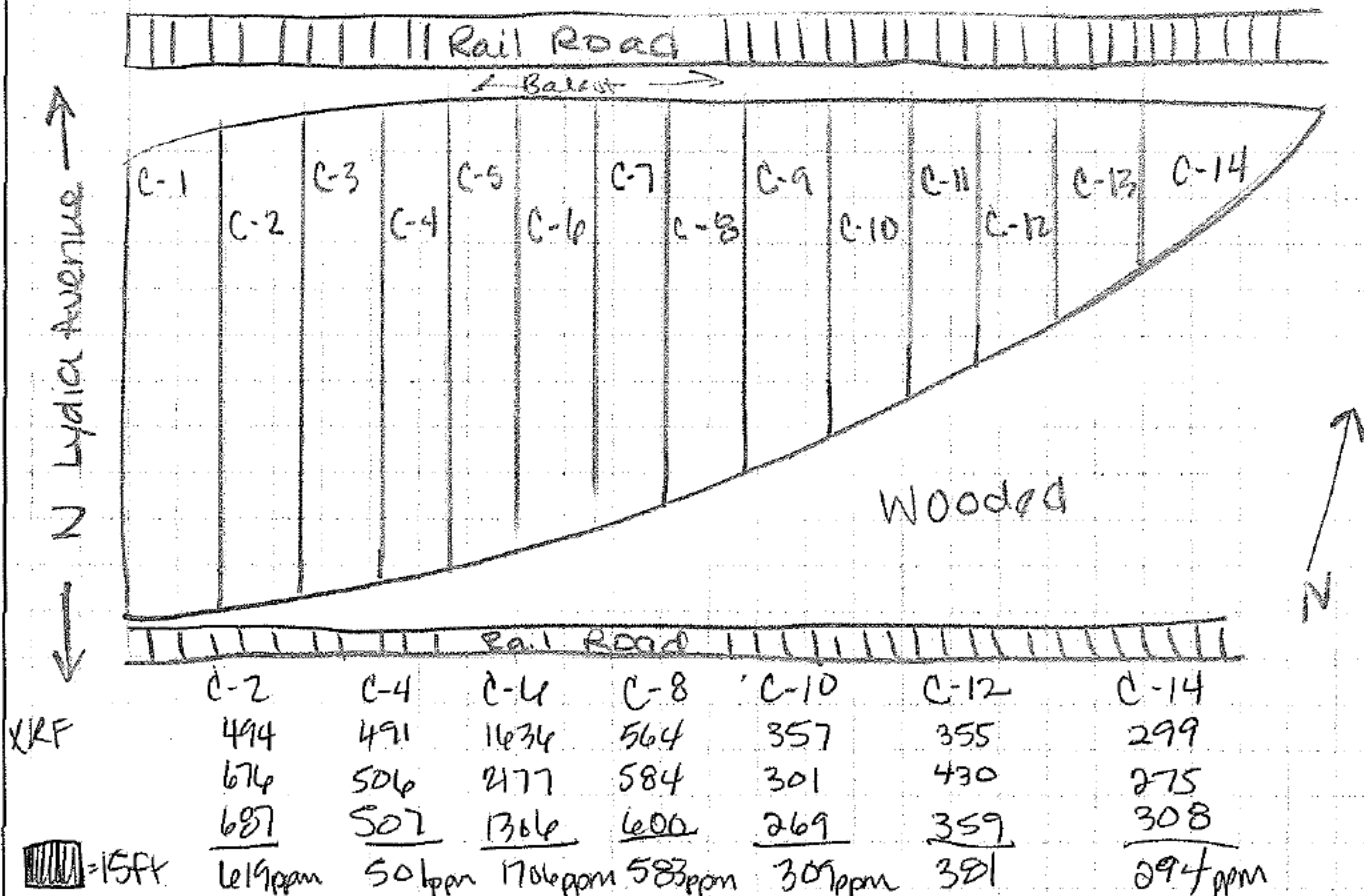
EPA Site #: PMR-002 Date of Access: 11/1/2019 Date of Screening: 11/5/2019
 Screening Results: XRF ID.: _____ Date: 11/8/2019 Operator: TR

Average XRF Pb Screening Results (ppm)

Cell 1: <u>303</u>	Cell 5: <u>393</u>	Cell 9: <u>488</u>	Cell 13: <u>229</u>
Cell 2: <u>619</u>	Cell 6: <u>1706</u>	Cell 10: <u>309</u>	Cell 14: <u>294</u>
Cell 3: <u>453</u>	Cell 7: <u>347</u>	Cell 11: <u>269</u>	Cell 15: _____
Cell 4: <u>501</u>	Cell 8: <u>583</u>	Cell 12: <u>381</u>	Cell 16: _____

N Lydia Avenue

C-1	C-3	C-5	C-7	C-9	C-11	C-13
XRF: 312	477	388	314	577	288	230
294	417	350	312	444	255	273
<u>300</u>	<u>465</u>	<u>440</u>	<u>415</u>	<u>443</u>	<u>263</u>	<u>233</u>
303ppm	453ppm	393ppm	347ppm	488ppm	269ppm	229ppm



Price Metal Refining, Property Screening Form

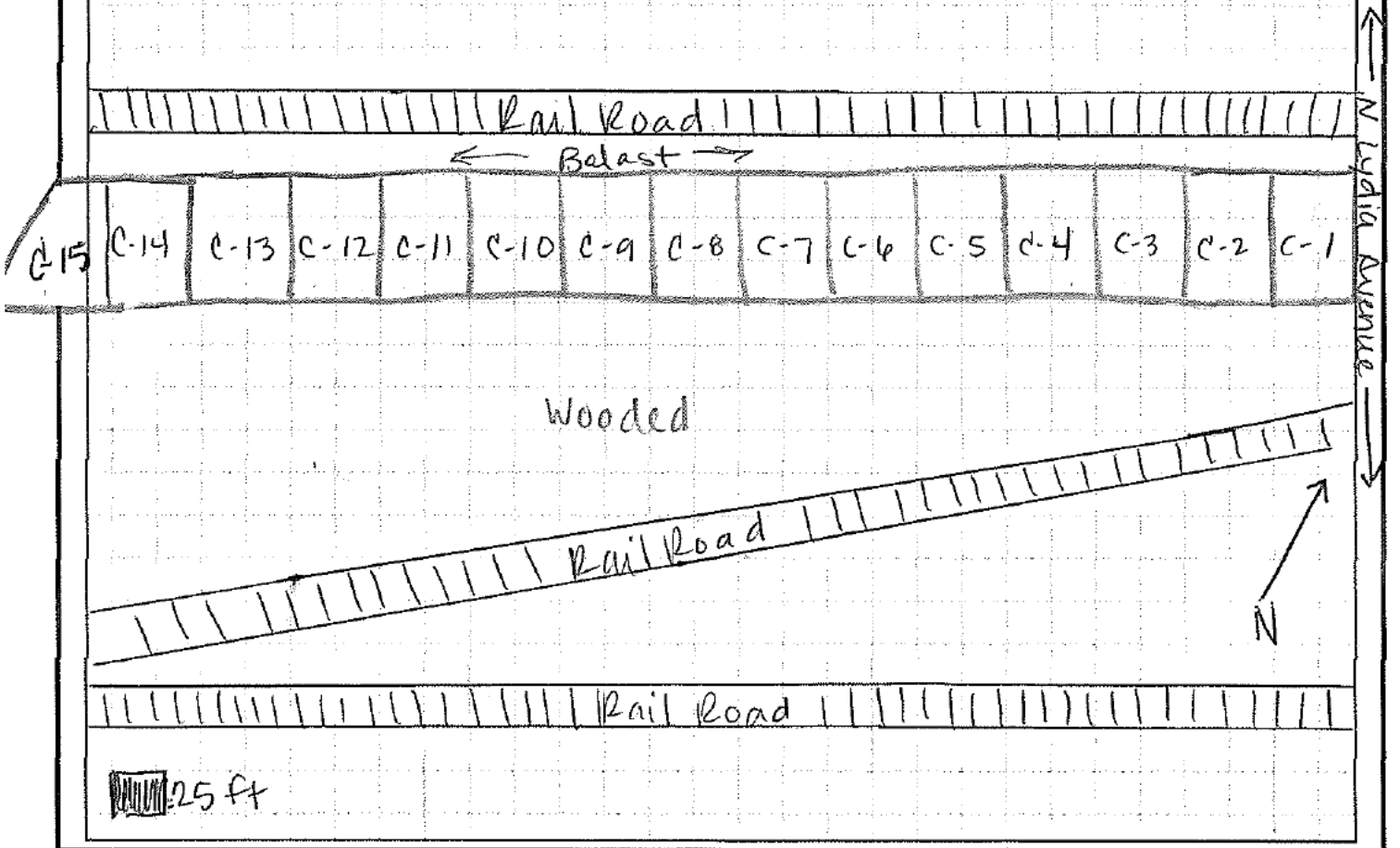
EPA Site #: PMR- 003 Date of Access: 11/11/2019 Date of Screening: 11/5/2019
 Screening Results: XRF I.D.: _____ Date: 11/8/2019 Operator: _____

Average XRF Pb Screening Results (ppm)

Cell 1: <u>299</u>	Cell 5: <u>119</u>	Cell 9: <u>34</u>	Cell 13: <u>57</u>
Cell 2: <u>138</u>	Cell 6: <u>67</u>	Cell 10: <u>71</u>	Cell 14: <u>62</u>
Cell 3: <u>137</u>	Cell 7: <u>62</u>	Cell 11: <u>55</u>	Cell 15: <u>60</u>
Cell 4: <u>111</u>	Cell 8: <u>54</u>	Cell 12: <u>57</u>	Cell 16: _____

N. Lydia Avenue

C-15	C-14	C-13	C-12	C-11	C-10	C-9	C-8	C-7	C-6	C-5	C-4	C-3	C-2	C-1
62	66	60	70	44	66	32	53	62	64	121	121	128	135	288
56	60	58	50	60	72	26	57	56	76	112	101	150	151	319
61	59	52	50	61	76	43	51	67	62	124	112	133	129	292
Opposite	67ppm	57ppm	57ppm	55ppm	71ppm	34ppm	54ppm	62ppm	67ppm	119ppm	111ppm	137ppm	138ppm	299ppm

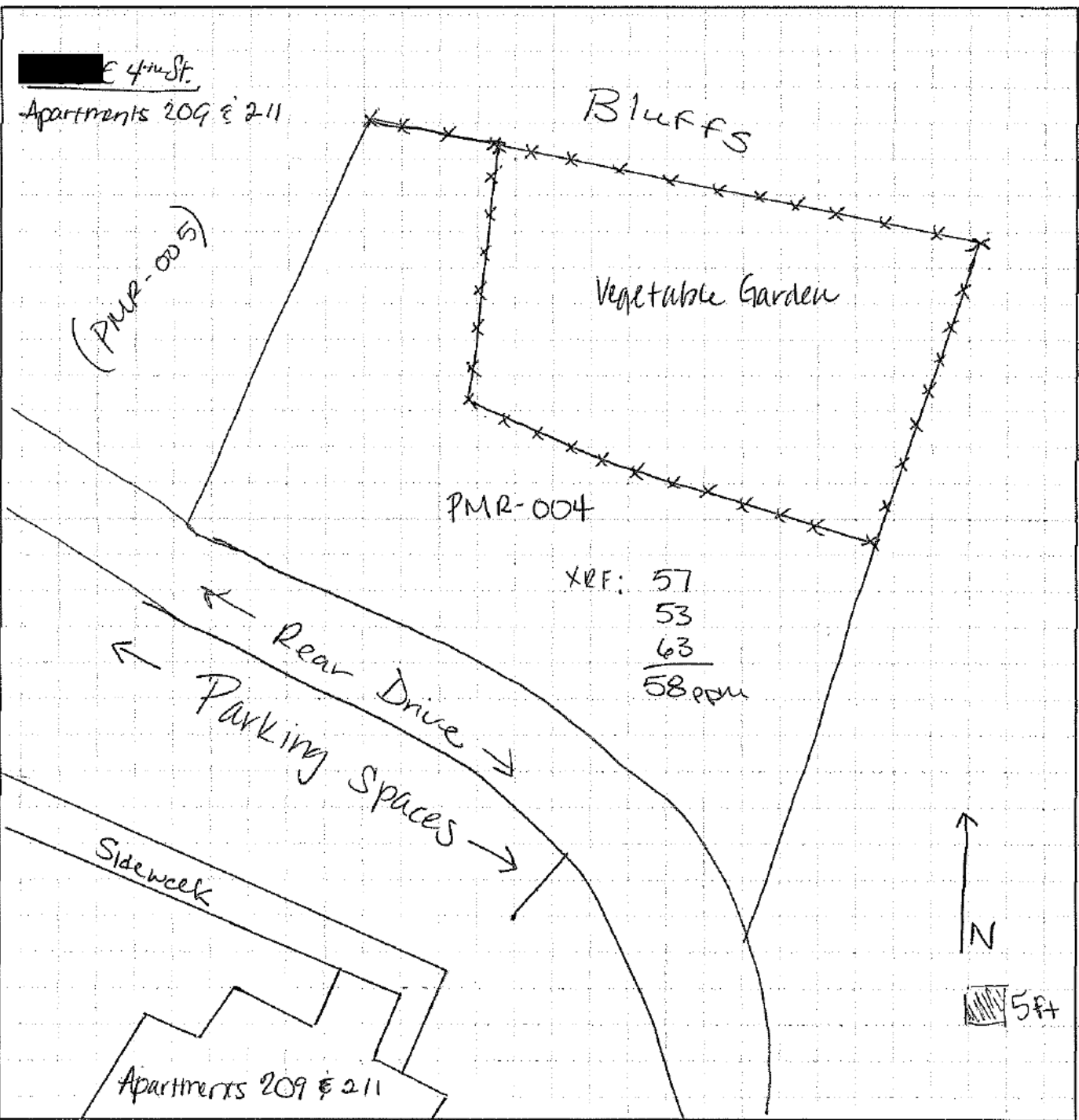


Price Metal Refining, Property Screening Form

EPA Site #: PMR- 004 Date of Access: 11/1/2019 Date of Screening: 11/5/2019
 Screening Results: XRF I.D.: _____ Date: 11/8/2019 Operator: TR

Average XRF Pb Screening Results (ppm)

Cell 1: <u>58</u>	Cell 5: _____	Cell 9: _____	Cell 13: _____
Cell 2: _____	Cell 6: _____	Cell 10: _____	Cell 14: _____
Cell 3: _____	Cell 7: _____	Cell 11: _____	Cell 15: _____
Cell 4: _____	Cell 8: _____	Cell 12: _____	Cell 16: _____



Price Metal Refining, Property Screening Form

EPA Site #: PMR- 005

Date of Access: 11/1/2019

Date of Screening: 11/5/2019

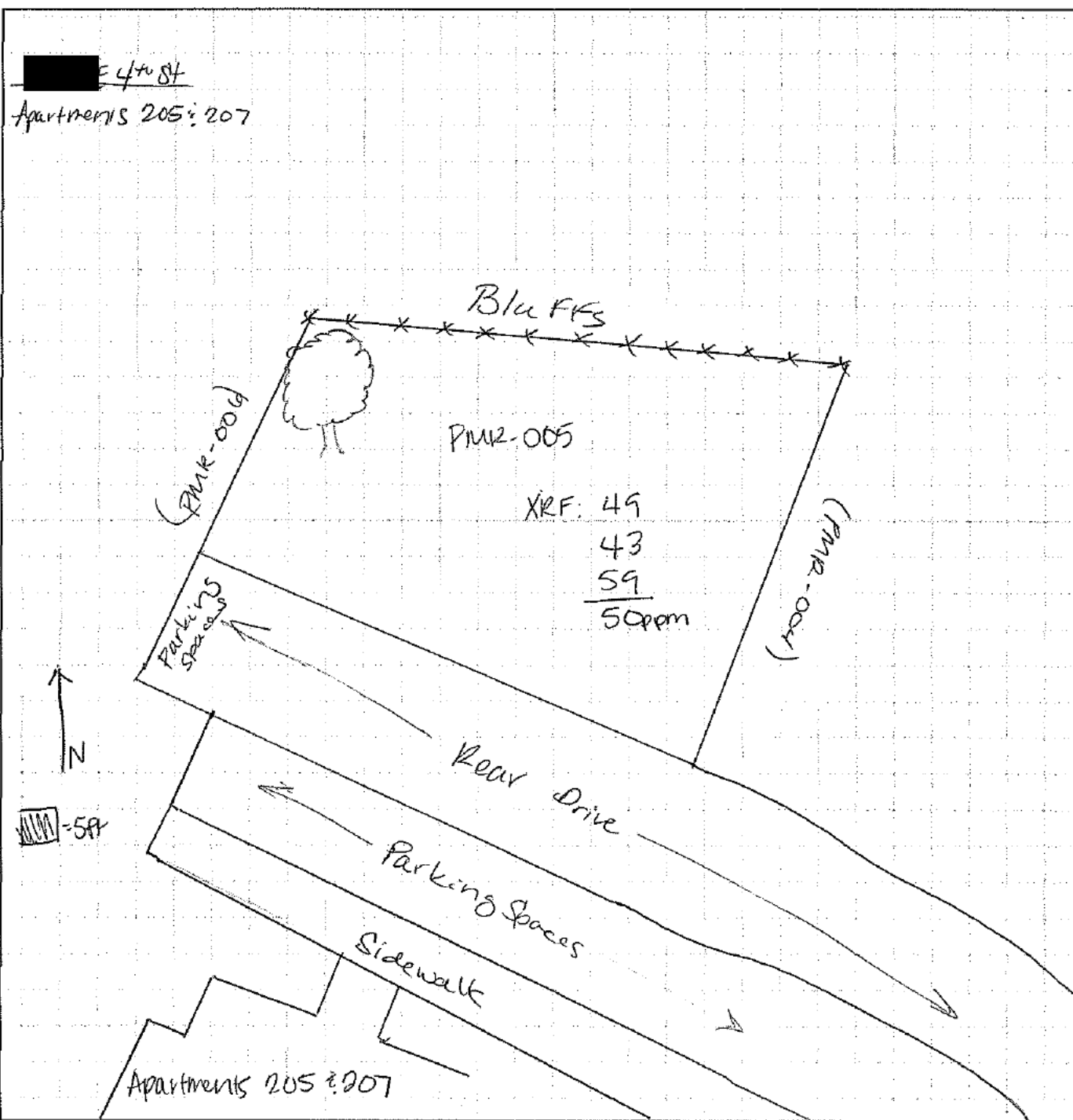
Screening Results: XRF I.D.: _____

Date: 11/8/2019

Operator: TR

Average XRF Pb Screening Results (ppm)

Cell 1: <u>50</u>	Cell 5: _____	Cell 9: _____	Cell 13: _____
Cell 2: _____	Cell 6: _____	Cell 10: _____	Cell 14: _____
Cell 3: _____	Cell 7: _____	Cell 11: _____	Cell 15: _____
Cell 4: _____	Cell 8: _____	Cell 12: _____	Cell 16: _____



Price Metal Refining, Property Screening Form

EPA Site #: PMR-006

Date of Access: 11/1/2019

Date of Screening: 11/5/2019

Screening Results: XRF I.D.: _____

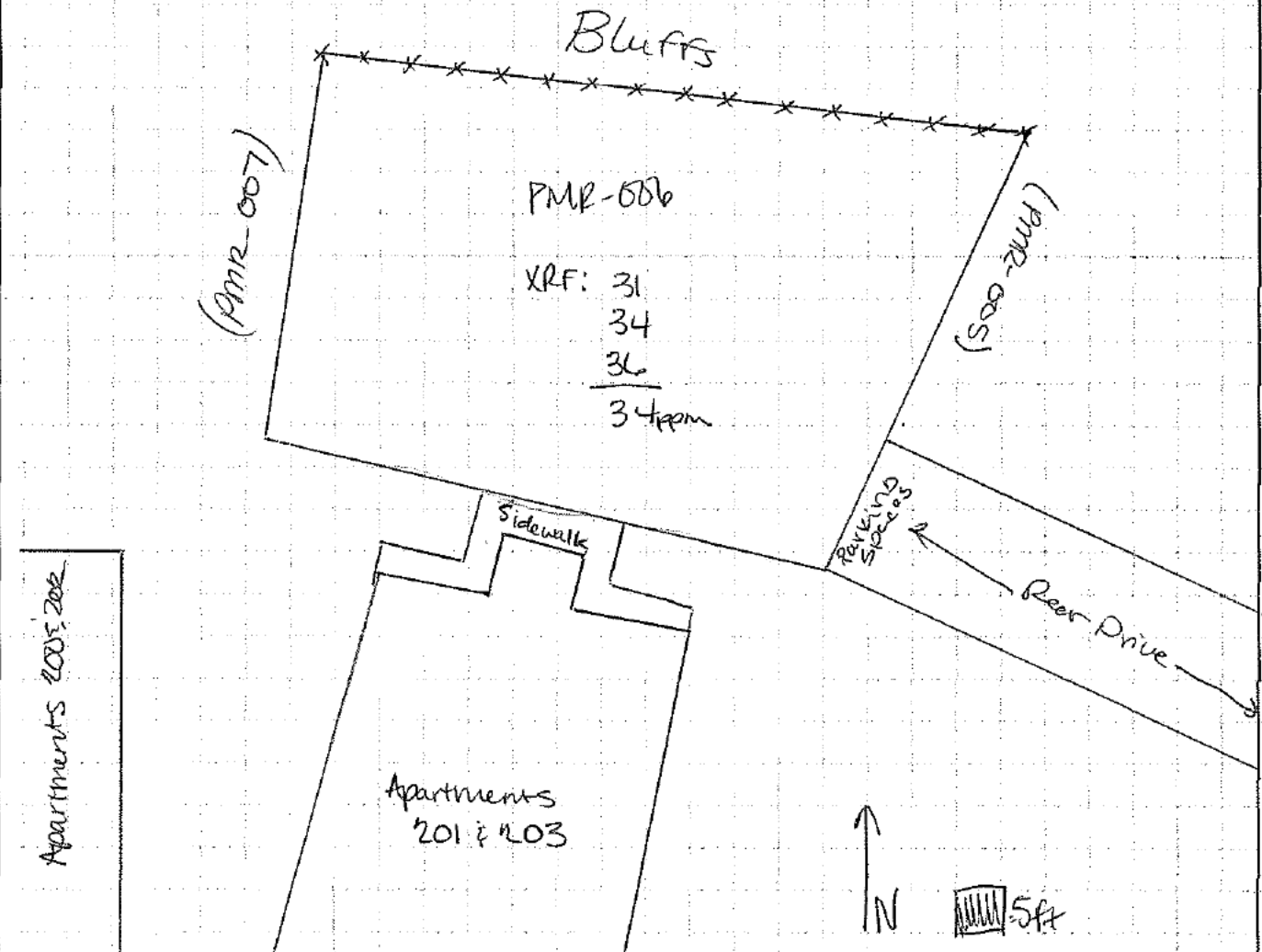
Date: 11/8/2019

Operator: TR

Average XRF Pb Screening Results (ppm)

Cell 1: <u>34</u>	Cell 5: _____	Cell 9: _____	Cell 13: _____
Cell 2: _____	Cell 6: _____	Cell 10: _____	Cell 14: _____
Cell 3: _____	Cell 7: _____	Cell 11: _____	Cell 15: _____
Cell 4: _____	Cell 8: _____	Cell 12: _____	Cell 16: _____

E 4th St
Apartment 201 & 203



Price Metal Refining, Property Screening Form

EPA Site #: PMR- 007

Date of Access: 11/1/2019

Date of Screening: 11/5/2019

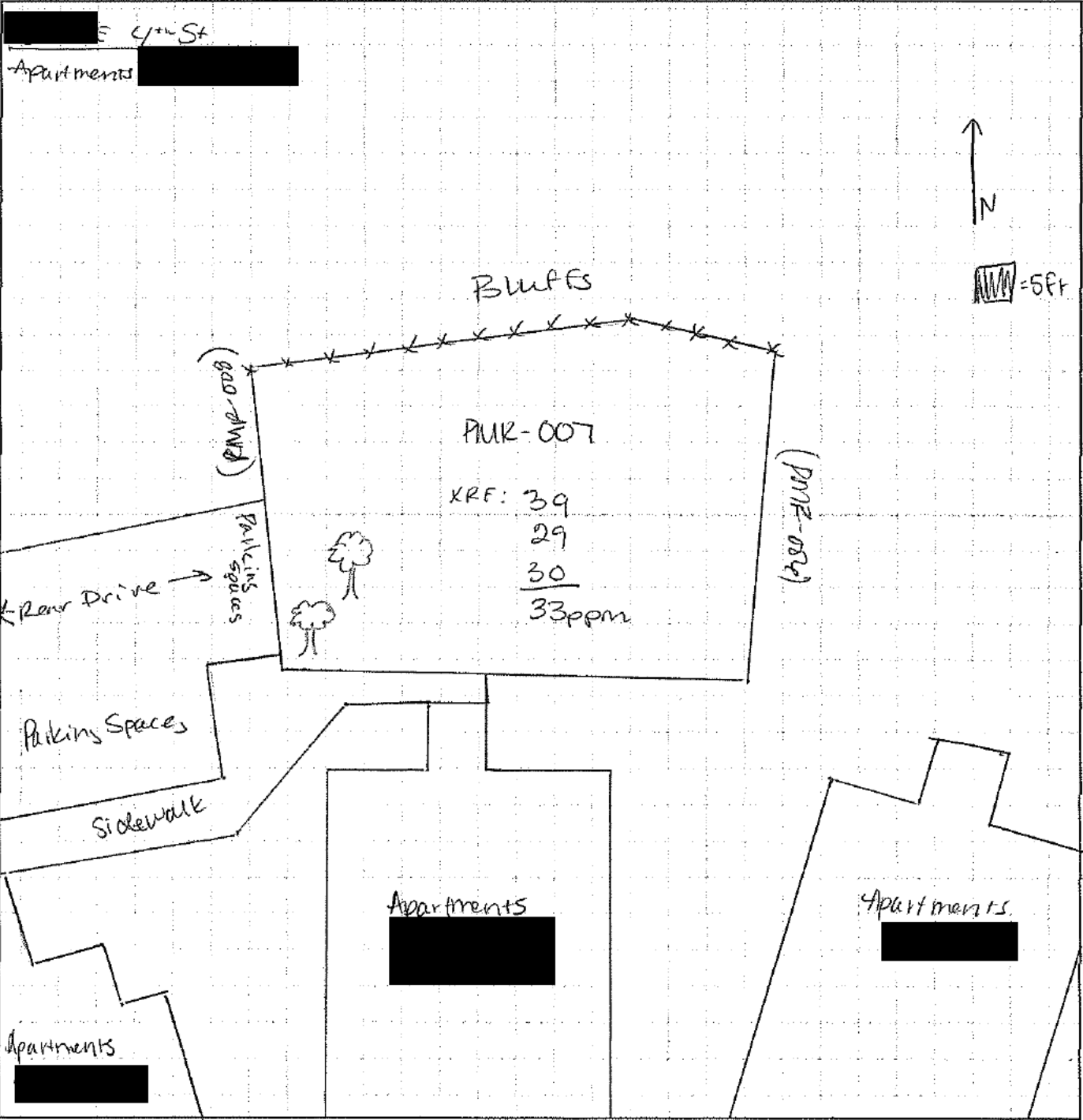
Screening Results: XRF I.D.: _____

Date: 11/8/2019

Operator: TR

Average XRF Pb Screening Results (ppm)

Cell 1: <u>33ppm</u>	Cell 5: _____	Cell 9: _____	Cell 13: _____
Cell 2: _____	Cell 6: _____	Cell 10: _____	Cell 14: _____
Cell 3: _____	Cell 7: _____	Cell 11: _____	Cell 15: _____
Cell 4: _____	Cell 8: _____	Cell 12: _____	Cell 16: _____

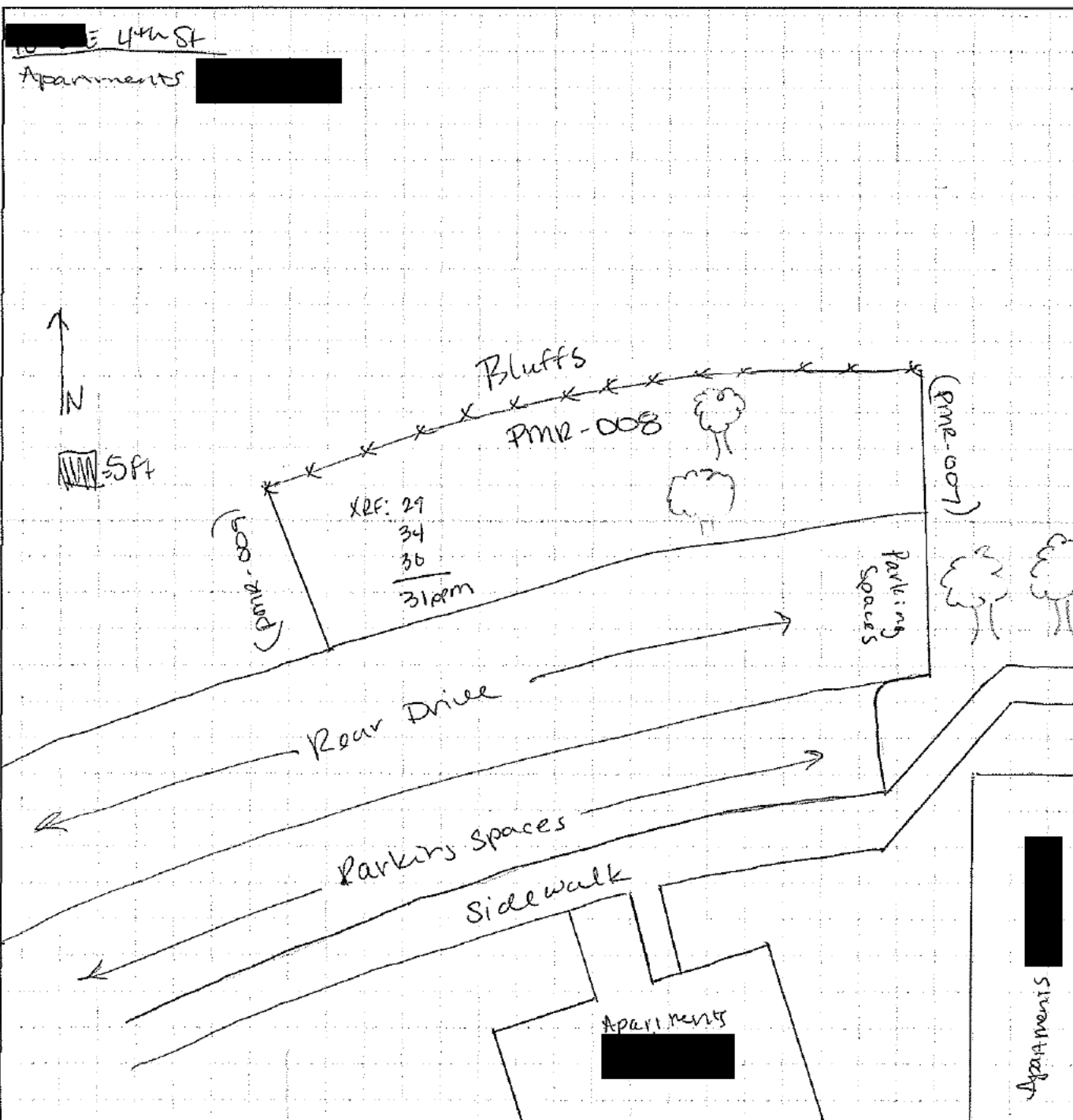


Price Metal Refining, Property Screening Form

EPA Site #: PMR-008 Date of Access: 11/1/2019 Date of Screening: 11/5/19
 Screening Results: XRF I.D.: _____ Date: 11/8/2019 Operator: TK

Average XRF Pb Screening Results (ppm)

Cell 1: <u>31 ppm</u>	Cell 5: _____	Cell 9: _____	Cell 13: _____
Cell 2: _____	Cell 6: _____	Cell 10: _____	Cell 14: _____
Cell 3: _____	Cell 7: _____	Cell 11: _____	Cell 15: _____
Cell 4: _____	Cell 8: _____	Cell 12: _____	Cell 16: _____

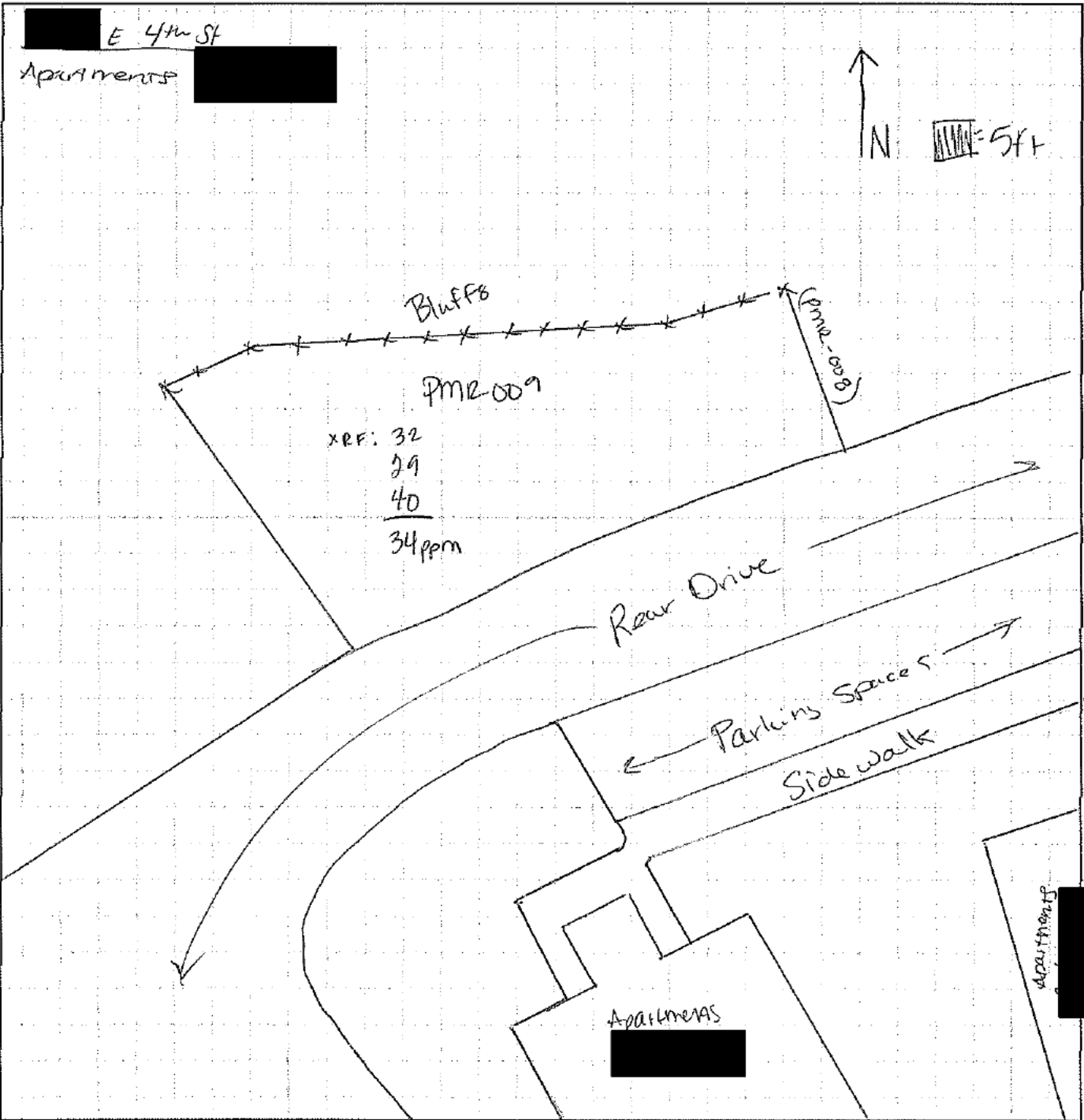


Price Metal Refining, Property Screening Form

EPA Site #: PMR- 009 Date of Access: 11/1/2019 Date of Screening: 11/5/2019
 Screening Results: XRF I.D.: _____ Date: 11/8/2019 Operator: TIC

Average XRF Pb Screening Results (ppm)

Cell 1: <u>34 ppm</u>	Cell 5: _____	Cell 9: _____	Cell 13: _____
Cell 2: _____	Cell 6: _____	Cell 10: _____	Cell 14: _____
Cell 3: _____	Cell 7: _____	Cell 11: _____	Cell 15: _____
Cell 4: _____	Cell 8: _____	Cell 12: _____	Cell 16: _____



Price Metal Refining, Property Screening Form

EPA Site #: PMR- 010

Date of Access: 11/1/2019

Date of Screening: 11/5/2019

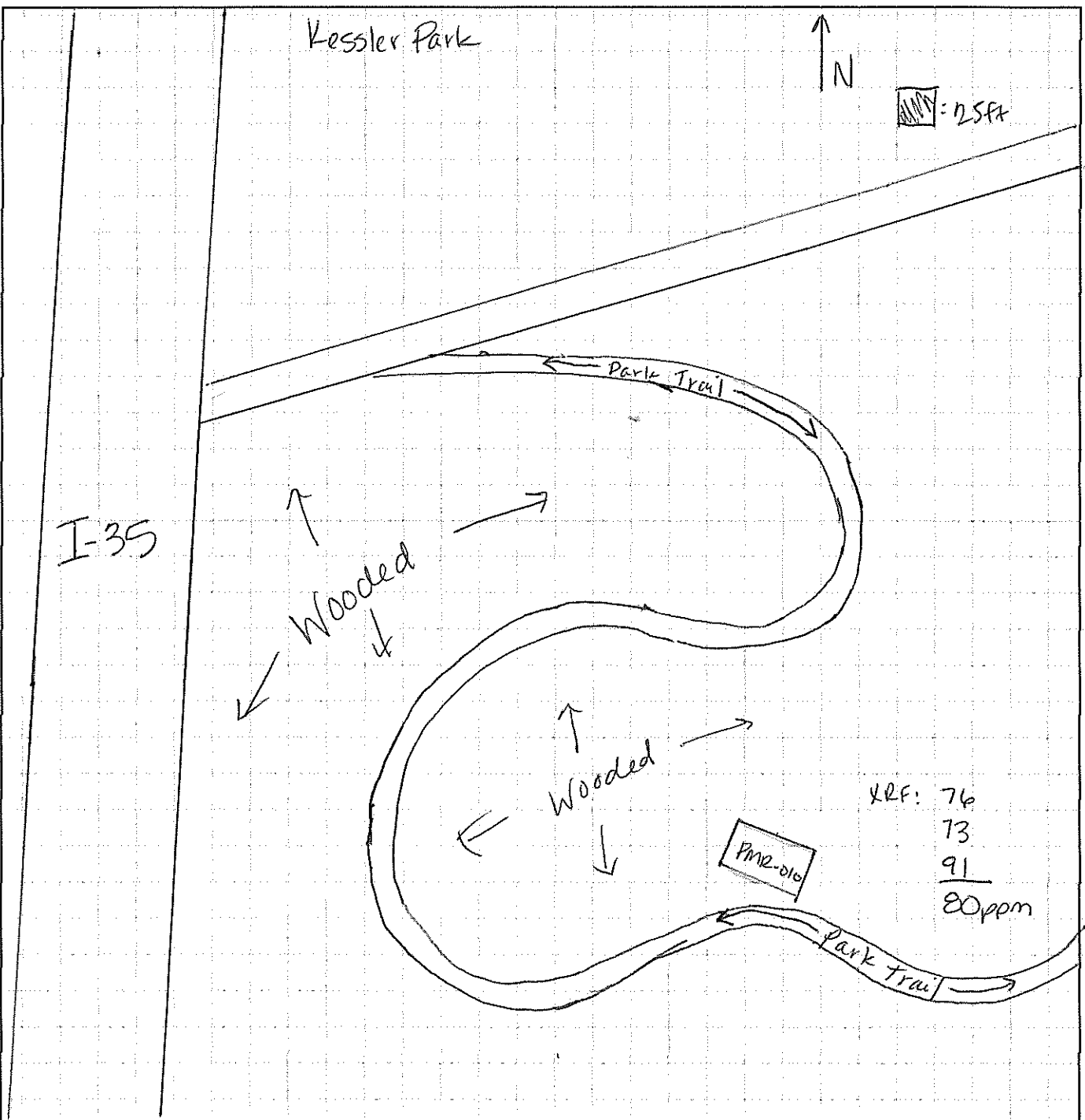
Screening Results: XRF I.D.: _____

Date: 11/8/2019

Operator: TR

Average XRF Pb Screening Results (ppm)

Cell 1: 80	Cell 5: _____	Cell 9: _____	Cell 13: _____
Cell 2: _____	Cell 6: _____	Cell 10: _____	Cell 14: _____
Cell 3: _____	Cell 7: _____	Cell 11: _____	Cell 15: _____
Cell 4: _____	Cell 8: _____	Cell 12: _____	Cell 16: _____



Price Metal Refining, Property Screening Form

EPA Site #: PMR- 011

Date of Access: 11/1/2019

Date of Screening: 8/6/2020

Screening Results: XRF I.D.: _____

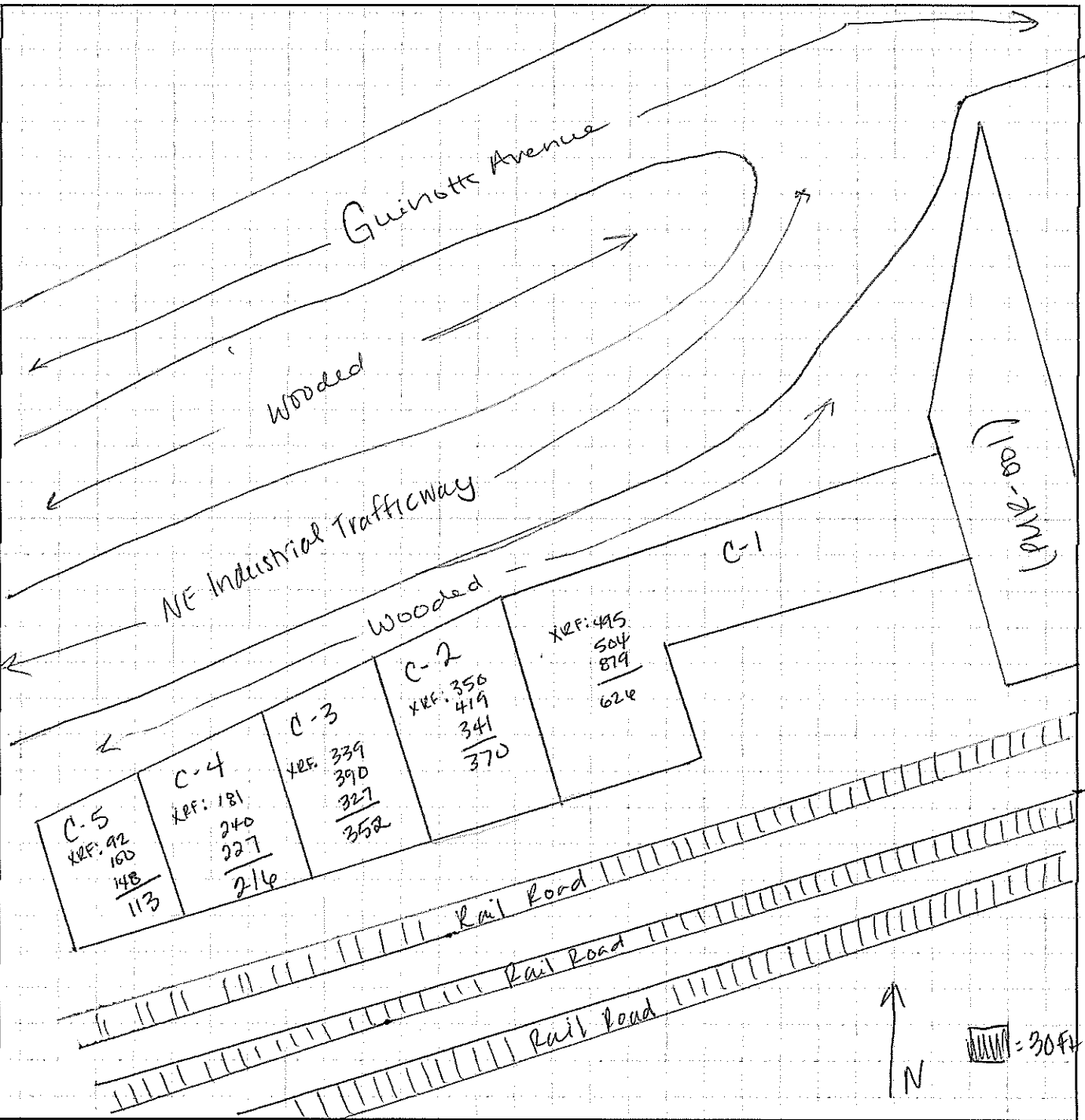
Date: 2/6/2020

Operator: LM

Average XRF Pb Screening Results (ppm)

2/7/2020 ^{LM}

Cell 1: <u>626</u>	Cell 5: <u>113</u>	Cell 9: _____	Cell 13: _____
Cell 2: <u>370</u>	Cell 6: _____	Cell 10: _____	Cell 14: _____
Cell 3: <u>352</u>	Cell 7: _____	Cell 11: _____	Cell 15: _____
Cell 4: <u>214</u>	Cell 8: _____	Cell 12: _____	Cell 16: _____



APPENDIX D

FIELD SHEETS AND CHAIN-OF-CUSTODY RECORDS

**CHAIN OF CUSTODY RECORD
ENVIRONMENTAL PROTECTION AGENCY REGION VII**

EPA PROJECT MANAGER (Print) <u>Yvonne Smith</u>	SITE OR SAMPLING EVENT <u>Pricemetal Refining</u>	DATE OF SAMPLE COLLECTION(S) MONTH <u>11</u> DAY <u>5</u> YEAR <u>2019</u>	SHEET <u>1</u> of <u>1</u>
--	--	---	-------------------------------

CONTENTS OF SHIPMENT

ASR AND SAMPLE NUMBER	TYPE OF CONTAINERS				SAMPLED MEDIA				RECEIVING LABORATORY REMARKS OTHER INFORMATION (condition of samples upon receipt, other sample numbers, etc.)		
	1 L PLASTIC BOTTLE	802 Jar BOTTLE	BOTTLE	BOTTLE	VOA SET (3 VIALS EA)	WATER	SOLID	HAZ WASTE		AIR	OTHER
	NUMBER(S) OF CONTAINERS PER SAMPLE NUMBER										
8386-1		1					X				
2		1					X				
3		1					X				
4		1					X				
5		1					X				
6		1					X				
7		1					X				
8		1					X				
9		1					X				
10		1					X				
11		1					X				
12		1					X				
13		1					X				
14		1					X				
15		1					X				
16		1					X				
17		1					X				
18		1					X				
19		1					X				
20		1					X				
21		1					X				
22		1					X				
ASD complete											
Box of jars hand-delivered w/out ice.											

DESCRIPTION OF SHIPMENT <u>22</u> CONTAINER(S) CONSISTING OF _____ CRATE(S) <u>0</u> ICE CHEST(S): OTHER <u>BOX</u>	MODE OF SHIPMENT <u>Room Temp</u> <input checked="" type="checkbox"/> COMMERCIAL CARRIER <u>OK per PM 11/8/19</u> <input type="checkbox"/> SAMPLER CONVEYED _____ (SHIPPING AIRBILL NUMBER)
--	--

PERSONNEL CUSTODY RECORD

RELINQUISHED BY (PM/SAMPLER) <u>Sandra Murphy</u>	DATE <u>11/5/19</u>	TIME <u>11:14</u>	RECEIVED BY <u>Nash Rolly</u>	DATE <u>11/8/19</u>	TIME <u>11:44</u>	REASON FOR CHANGE OF CUSTODY <u>Anal</u>
<input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED			<input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED			
RELINQUISHED BY (PM/SAMPLER)	DATE	TIME	RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY
<input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED			<input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED			
RELINQUISHED BY (PM/SAMPLER)	DATE	TIME	RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY
<input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED			<input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED			
RELINQUISHED BY (PM/SAMPLER)	DATE	TIME	RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY
<input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED			<input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED			

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 1 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-1-__

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: PMR-001 C-1

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: _____

Sample Collection: Start: 11/5/11 10:45

Longitude: _____

End: / / :

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Max XRF: 558ppm

XRF# C00722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 2 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-2-____

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: PMR-001 C-2

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: _____

Sample Collection: Start: 11/5/19 10:45

Longitude: _____

End: ____/____/____ ____:____

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Max XRF : 7537 ppm
≡

XRF# 000722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 3 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-3-__

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: PMR-001 C-3

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: _____

Sample Collection: Start: 11/5/19 10:45

Longitude: _____

End: ____/____/____ ____:____

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Max XRF: 1295ppm

XRF # C00722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 4 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-4-____

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: PMR-003 C-1

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: _____

Sample Collection: Start: 11/5/19

12:00

Longitude: _____

End: / /

 :

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Max XRF: 319 ppm

XRF# C007ZZ

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 5 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-5-____

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: PMR-003 C-8

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: _____ **Sample Collection: Start:** 11/5/19 12:00
Longitude: _____ **End:** / / :

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Max XRF: 57 ppm

XRF# C05722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 6 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-6-____

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: PMB-003 C-14

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**
Latitude: _____ **Sample Collection: Start:** 11/5/19 12:02
Longitude: _____ **End:** ____/____/____ ____:____

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Max XRF: 66 ppm

XRF # C00722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 7 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-7-__

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: PMR-002C-5

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**
Latitude: _____ **Sample Collection: Start:** 11/5/19 11:00
Longitude: _____ **End:** / / :

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Max XRF: 440ppm

XRF # C00722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 8 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-8-____

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: PMR-002-LM C-8
002 **External Sample Number:** _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**
Latitude: _____ **Sample Collection: Start:** 11/5/19 11:00
Longitude: _____ **End:** / / :

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

max XRF: 600 ppm

XRF # 00722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 9 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-9-____

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: PMR-002 C-11

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**
Latitude: _____ **Sample Collection: Start:** 11/5/17 11:08
Longitude: _____ **End:** / / :

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Max XRF: 288ppm

XRF# C00722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 10 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-10-____

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: PMR-002 c-4

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**
Latitude: _____ **Sample Collection: Start:** 11/5/11 11:00
Longitude: _____ **End:** / / :

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Max XRF: 507 ppm

XRF# C00722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 11 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-11-____

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: PMR-082 C-12

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: _____

Sample Collection: Start: 11/5/17 11:00

Longitude: _____

End: ____/____/____ ____:____

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Max XRF: 357 ppm

XRF# C00722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 12 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-12-____

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: PMR-002 C-7

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**
Latitude: _____ **Sample Collection: Start:** 11/5/19 11:00
Longitude: _____ **End:** / / :

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

PMR-002

max XRF: 415ppm

XRF# C00722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 13 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-13-____

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: PMR-006

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: ____-____-____ **Sample Collection: Start:** 11/5/19 15:45
Longitude: ____-____-____ **End:** ____/____/____ ____:____

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Max XRF: 36ppm

XRF # 00722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 14 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-14-__

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: ~~PMR~~ PMR-009

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**
Latitude: _____ **Sample Collection: Start:** 11/5/19 15:56
Longitude: _____ **End:** __/__/__ __:__

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Max XRF: 40 ppm

XRF# C00722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 15 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-15-__

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: PMP 004

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: _____

Sample Collection: Start: 11/5/19 15:39

Longitude: _____

End: ____/____/____ ____:____

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Max XRF: 63 ppm

XRF # C00722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 16 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-16-____

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: KCSP-043

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: _____

Sample Collection: Start: 11/5/19

14:10

Longitude: _____

End: ____/____/____

____:____

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Max XRF: 38 ppm

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 17 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-17-____

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: KCSR-044

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**
Latitude: _____ **Sample Collection: Start:** 11/5/19 14:19
Longitude: _____ **End:** / / :

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

MAX XRF : 44 ppm

XRF# C00722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 18 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-18-__

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: KSR-645

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**
Latitude: _____ **Sample Collection: Start:** 11/5/19 14:31
Longitude: _____ **End:** / / :

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Max XRF: 97 ppm

XRF# C07722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 19 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-19-____

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: LCSP-D46

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**
Latitude: _____ **Sample Collection: Start:** 11/5/19 14:48
Longitude: _____ **End:** / / :

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Max XRF: 83ppm

XRF#

@00722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 20 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-20-____

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: PMR-002 C-1

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: _____

Sample Collection: Start: 11/5/19 11:00

Longitude: _____

End: ____/____/____ ____:____

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Max XRF:

XRF: C00722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 21 **QC Code:** ___ **Matrix:** Solid **Tag ID:** 8386-21-___

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: PMR-002 C-14

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**
Latitude: _____ **Sample Collection: Start:** 11/5/19 11:00
Longitude: _____ **End:** / / :

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

MAX XRF: 308ppm

XRF# C00722

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8386 **Sample Number:** 22 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8386-22-____

Project ID: YSPMR **Project Manager:** Yvonne Smith
Project Desc: Price Metal Refining
City: Kansas City **State:** Missouri
Program: Superfund
Site Name: Multi-Site - General **Site ID:** 07ZZ **Site OU:** 00

Location Desc: PMR - 003 C-2

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**
Latitude: _____ **Sample Collection: Start:** 11/5/19 12:00
Longitude: _____ **End:** / / :

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Max XRF: 151 ppm

XRF# C00722

Sample Collected By: TT

Cooler rec'd at room temp, no ice
& ok per PM since metals.
nr3/6/2020

1



Sample Analysis



APPENDIX E
ANALYTICAL DATA

**United States Environmental Protection Agency
Region 7
300 Minnesota Avenue
Kansas City, KS 66101**

Date: 11/26/2019

Subject: Transmittal of Sample Analysis Results for ASR #: 8386

Project ID: YSPMR

Project Description: Price Metal Refining

From: Margaret E.W. St. Germain, Chief
Laboratory Technology & Analysis Branch
Laboratory Services and Applied Sciences Division

To: Yvonne Smith
SEMD/AERR/RREP

Enclosed are the analytical data for the above-referenced Analytical Services Request (ASR) and Project. These results are based on samples as received at the Science and Technology Center. The Regional Laboratory has reviewed and verified the results in accordance with procedures described in our Quality Manual (QM). In addition to all of the analytical results, this transmittal contains pertinent information that may have influenced the reported results and documents any deviations from the established requirements of the QM.

Please ensure that you file this electronic (.pdf only) transmittal in your records management system. The Regional Laboratory will now retain all of the original hardcopy documentation (e.g. COC[s] and the R7LIMS field sheet[s], etc.) according to our LSASD records management system.

Please contact us within 14 days of receipt of this package if you determine there is a need for any changes. Please complete the Online ASR Sample/Data Disposition and Customer Survey for this ASR as soon as possible. The process of disposing of the samples for this ASR will be initiated 30 days from the date of this transmittal unless an alternate release date is specified on the Online ASR Sample/Data Disposition and Customer Survey. It is critical that we receive your response in accordance to RCRA and the laboratory accreditation.

If you have any questions or concerns relating to this data package, contact our customer service line at 913-551-5295.

Project Manager: Yvonne Smith**Org:** SEMD/AERR/R
REP**Phone:** 913-551-7795**Project ID:** YSPMR**Project Desc:** Price Metal Refining**Location:** Kansas City**State:** Missouri**Program:** Superfund**Site Name:** Multi-Site - General**Site ID:** 07ZZ **Site OU:** 00**Purpose:** Site Characterization**GPRA PRC:** 000DC6

CERCLIS ID: MON000706445.

Integrated Site Assessment sampling. Residential lead sampling. Soil sampling and documentation to support a Removal Assessment.

Per submitted ASR dated 9/19/2019 this ASR is not part of a litigation hold at this time.

GPRA/site code (+OU) check OK per JN on 9/20/19.

Explanation of Codes, Units and Qualifiers used on this report**Sample QC Codes:** QC Codes identify the type of sample for quality control purpose.**Units:** Specific units in which results are reported.

___ = Field Sample

mg/kg = Milligrams per Kilogram

% = Percent

Data Qualifiers: Specific codes used in conjunction with data values to provide additional information on the quality of reported results, or used to explain the absence of a specific value.

(Blank)= Values have been reviewed and found acceptable for use.

UJ = The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.

J = The identification of the analyte is acceptable; the reported value is an estimate.

U = The analyte was not detected at or above the reporting limit.

ASR Number: 8386**Sample Information Summary****11/26/2019****Project ID: YSPMR****Project Desc: Price Metal Refining**

Sample No	QC Code	Matrix	Location Description	External Sample No	Start Date	Start Time	End Date	End Time	Receipt Date
1 - ___		Solid	PMR-001, C-1		11/05/2019	10:45			11/08/2019
2 - ___		Solid	PMR-001, C-2		11/05/2019	10:45			11/08/2019
3 - ___		Solid	PMR-001, C-3		11/05/2019	10:45			11/08/2019
4 - ___		Solid	PMR-003, C-1		11/05/2019	12:00			11/08/2019
5 - ___		Solid	PMR-003, C-8		11/05/2019	12:00			11/08/2019
6 - ___		Solid	PMR-003, C-14		11/05/2019	12:00			11/08/2019
7 - ___		Solid	PMR-002, C-5		11/05/2019	11:00			11/08/2019
8 - ___		Solid	PMR-002, C-8		11/05/2019	11:00			11/08/2019
9 - ___		Solid	PMR-002, C-11		11/05/2019	11:08			11/08/2019
10 - ___		Solid	PMR-002, C-4		11/05/2019	11:00			11/08/2019
11 - ___		Solid	PMR-002, C-12		11/05/2019	11:00			11/08/2019
12 - ___		Solid	PMR-002, C-7		11/05/2019	11:00			11/08/2019
13 - ___		Solid	PMR-006		11/05/2019	15:45			11/08/2019
14 - ___		Solid	PMR-009		11/05/2019	15:56			11/08/2019
15 - ___		Solid	PMR-004		11/05/2019	15:39			11/08/2019
16 - ___		Solid	KCSR-043		11/05/2019	14:10			11/08/2019
17 - ___		Solid	KCSR-044		11/05/2019	14:19			11/08/2019
18 - ___		Solid	KCSR-045		11/05/2019	14:31			11/08/2019
19 - ___		Solid	KCSR-046		11/05/2019	14:48			11/08/2019
20 - ___		Solid	PMR-002, C-1		11/05/2019	11:00			11/08/2019
21 - ___		Solid	PMR-002, C-14		11/05/2019	11:00			11/08/2019
22 - ___		Solid	PMR-003, C-2		11/05/2019	12:00			11/08/2019

Analysis Comments About Results For This Analysis

1 Percent Solid

Lab: Region 7 ESAT Contract Lab (In-House)**Method:** EPA Region 7 RLAB Method 3142.9H**Basis:** N/A

Samples: 1-__ 2-__ 3-__ 4-__ 5-__ 6-__ 7-__
 8-__ 9-__ 10-__ 11-__ 12-__ 13-__ 14-__
 15-__ 16-__ 17-__ 18-__ 19-__ 20-__ 21-__
 22-__

Comments:

1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES

Lab: Region 7 ESAT Contract Lab (In-House)**Method:** EPA Region 7 RLAB Method 3122.3G**Basis:** Dry

Samples: 1-__ 2-__ 3-__ 4-__ 5-__ 6-__ 7-__
 8-__ 9-__ 10-__ 11-__ 12-__ 13-__ 14-__
 15-__ 16-__ 17-__ 18-__ 19-__ 20-__ 21-__
 22-__

Comments:

Barium (70, 75-114) and cadmium (72, 72, 75-105) were J-coded in sample 3. Although the analytes in question have been positively identified in the sample, the quantitations are estimates (J-coded) due to low recovery of these analytes in the laboratory matrix spike. The actual concentrations for these analytes may be higher than the reported values.

Silver (83, 6.3) was UJ-coded in sample 3. This analyte was not found in the sample at or above the reporting limit, however, the reporting limit is an estimate (UJ-coded) due to poor precision obtained for this analyte in the laboratory matrix spike and matrix spike duplicate. The actual reporting limit for this analyte may be higher than the reported value.

ASR Number: 8386

RLAB Approved Sample Analysis Results

11/26/2019

Project ID: YSPMR

Project Desc: Price Metal Refining

Analysis/ Analyte	Units	1-__	2-__	3-__	4-__
1 Percent Solid					
Solids, percent	%	97.1	93.7	97.4	97.9
1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES					
Arsenic	mg/kg	8.1	27.5	15.3	10.8
Barium	mg/kg	108	410	142 J	159
Cadmium	mg/kg	2.7	15.0	4.2 J	2.8
Chromium	mg/kg	12.0	28.5	19.7	12.6
Lead	mg/kg	398	9420	1330	272
Selenium	mg/kg	10.2 U	11.6	10.2 U	10.2 U
Silver	mg/kg	2.0 U	2.1 U	2.0 UJ	2.0 U

ASR Number: 8386

RLAB Approved Sample Analysis Results

11/26/2019

Project ID: YSPMR

Project Desc: Price Metal Refining

Analysis/ Analyte	Units	5-__	6-__	7-__	8-__
1 Percent Solid					
Solids, percent	%	96.9	95.9	96.3	96.3
1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES					
Arsenic	mg/kg	5.1 U	5.2 U	9.8	13.9
Barium	mg/kg	110	78.8	248	280
Cadmium	mg/kg	1.1	1.4	3.5	3.8
Chromium	mg/kg	6.5	5.6	14.7	16.0
Lead	mg/kg	44.2	52.8	326	452
Selenium	mg/kg	10.3 U	10.4 U	10.3 U	9.9 U
Silver	mg/kg	2.1 U	2.1 U	2.1 U	2.0 U

ASR Number: 8386

RLAB Approved Sample Analysis Results

11/26/2019

Project ID: YSPMR

Project Desc: Price Metal Refining

Analysis/ Analyte	Units	9-__	10-__	11-__	12-__
1 Percent Solid					
Solids, percent	%	96.2	94.7	96.5	93.7
1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES					
Arsenic	mg/kg	13.2	22.0	5.9	11.2
Barium	mg/kg	158	416	187	213
Cadmium	mg/kg	2.6	4.9	2.8	3.4
Chromium	mg/kg	13.7	18.1	10.9	15.6
Lead	mg/kg	236	575	239	340
Selenium	mg/kg	10.4 U	10.3 U	10.2 U	10.6 U
Silver	mg/kg	2.1 U	2.1 U	2.0 U	2.1 U

ASR Number: 8386

RLAB Approved Sample Analysis Results

11/26/2019

Project ID: YSPMR

Project Desc: Price Metal Refining

Analysis/ Analyte	Units	13-__	14-__	15-__	16-__
1 Percent Solid					
Solids, percent	%	95.4	95.9	92.4	96.6
1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES					
Arsenic	mg/kg	5.2 U	5.4	5.8	8.6
Barium	mg/kg	128	154	174	145
Cadmium	mg/kg	1.3	1.3	1.8	1.7
Chromium	mg/kg	11.6	13.8	12.1	13.0
Lead	mg/kg	31.2	33.6	52.2	35.8
Selenium	mg/kg	10.4 U	10.4 U	10.0 U	10.2 U
Silver	mg/kg	2.1 U	2.1 U	2.0 U	2.0 U

ASR Number: 8386

RLAB Approved Sample Analysis Results

11/26/2019

Project ID: YSPMR

Project Desc: Price Metal Refining

Analysis/ Analyte	Units	17-__	18-__	19-__	20-__
1 Percent Solid					
Solids, percent	%	96.7	94.9	94.9	95.7
1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES					
Arsenic	mg/kg	5.2	7.5	6.9	16.6
Barium	mg/kg	117	147	147	284
Cadmium	mg/kg	1.6	2.2	1.8	7.1
Chromium	mg/kg	10.4	14.1	17.7	21.5
Lead	mg/kg	34.1	69.2	39.2	265
Selenium	mg/kg	9.8 U	10.1 U	10.3 U	9.7 U
Silver	mg/kg	2.0 U	2.0 U	2.1 U	1.9 U

ASR Number: 8386

RLAB Approved Sample Analysis Results

11/26/2019

Project ID: YSPMR

Project Desc: Price Metal Refining

Analysis/ Analyte	Units	21-__	22-__
1 Percent Solid			
Solids, percent	%	93.9	98.1
1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES			
Arsenic	mg/kg	12.9	16.5
Barium	mg/kg	190	130
Cadmium	mg/kg	3.2	2.4
Chromium	mg/kg	20.1	10.1
Lead	mg/kg	297	115
Selenium	mg/kg	10.4 U	10.0 U
Silver	mg/kg	2.1 U	2.0 U

**United States Environmental Protection Agency
Region 7
300 Minnesota Avenue
Kansas City, KS 66101**

Date: 03/06/2020

Subject: Transmittal of Sample Analysis Results for ASR #: 8486

Project ID: YSPMR

Project Description: Price Metal Refining

From: Margaret E.W. St. Germain, Chief
Laboratory Technology & Analysis Branch
Laboratory Services and Applied Sciences Division

To: Yvonne Smith
SEMD/AERR/RREP

Enclosed are the analytical data for the above-referenced Analytical Services Request (ASR) and Project. These results are based on samples as received at the Science and Technology Center. The Regional Laboratory has reviewed and verified the results in accordance with procedures described in our Quality Manual (QM). In addition to all of the analytical results, this transmittal contains pertinent information that may have influenced the reported results and documents any deviations from the established requirements of the QM.

Please ensure that you file this electronic (.pdf only) transmittal in your records management system. The Regional Laboratory will now retain all of the original hardcopy documentation (e.g. COC[s] and the R7LIMS field sheet[s], etc.) according to our LSASD records management system.

Please contact us within 14 days of receipt of this package if you determine there is a need for any changes. Please complete the Online ASR Sample/Data Disposition and Customer Survey for this ASR as soon as possible. The process of disposing of the samples for this ASR will be initiated 30 days from the date of this transmittal unless an alternate release date is specified on the Online ASR Sample/Data Disposition and Customer Survey. It is critical that we receive your response in accordance to RCRA and the laboratory accreditation.

If you have any questions or concerns relating to this data package, contact our customer service line at 913-551-5295.

Project Manager: Yvonne Smith**Org:** SEMD/AERR/R
REP**Phone:** 913-551-7795**Project ID:** YSPMR**Project Desc:** Price Metal Refining**Location:** Kansas City**State:** Missouri**Program:** Superfund**Site Name:** Multi-Site - General**Site ID:** 07ZZ **Site OU:** 00**Purpose:** Site Characterization**GPRA PRC:** 000DC6

CERCLIS ID: MON000706445.

Integrated Site Assessment sampling. Residential lead sampling. Soil sampling and documentation to support a Removal Assessment.

Per submitted ASR dated 1/8/2020 this ASR is not part of a litigation hold at this time.

GPRA/site code (+OU) check OK per JN on 1/8/2020.

Explanation of Codes, Units and Qualifiers used on this report**Sample QC Codes:** QC Codes identify the type of sample for quality control purpose.**Units:** Specific units in which results are reported.

___ = Field Sample

mg/kg = Milligrams per Kilogram

% = Percent

Data Qualifiers: Specific codes used in conjunction with data values to provide additional information on the quality of reported results, or used to explain the absence of a specific value.

(Blank)= Values have been reviewed and found acceptable for use.

U = The analyte was not detected at or above the reporting limit.

ASR Number: 8486**Sample Information Summary****03/06/2020****Project ID:** YSPMR**Project Desc:** Price Metal Refining

Sample No	QC Code	Matrix	Location Description	External Sample No	Start Date	Start Time	End Date	End Time	Receipt Date
1 - ____		Solid	PMR-011 C-1		02/06/2020	11:00	02/06/2020		02/10/2020
2 - ____		Solid	PMR-011 C-2		02/06/2020	11:10	02/06/2020		02/10/2020
3 - ____		Solid	PMR-011 C-3		02/06/2020	11:20	02/06/2020		02/10/2020
4 - ____		Solid	PMR-011 C-4		02/06/2020	11:30	02/06/2020		02/10/2020
5 - ____		Solid	PMR-011 C-5		02/06/2020	11:40	02/06/2020		02/10/2020

Analysis Comments About Results For This Analysis

1 Percent Solid

Lab: Region 7 EPA Laboratory - Kansas City, Ks.**Method:** EPA Region 7 RLAB Method 3142.9H**Basis:** N/A**Samples:** 1-__ 2-__ 3-__ 4-__ 5-__**Comments:**
(N/A)

1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES

Lab: Region 7 EPA Laboratory - Kansas City, Ks.**Method:** EPA Region 7 RLAB Method 3122.3H**Basis:** Dry**Samples:** 1-__ 2-__ 3-__ 4-__ 5-__**Comments:**

ASR Number: 8486

RLAB Approved Sample Analysis Results

03/06/2020

Project ID: YSPMR

Project Desc: Price Metal Refining

Analysis/ Analyte	Units	1-__	2-__	3-__	4-__
1 Percent Solid					
Solids, percent	%	87.2	84.8	88.1	83.4
1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES					
Arsenic	mg/kg	26.0	20.7	38.5	54.1
Barium	mg/kg	204	222	193	184
Cadmium	mg/kg	7.56	7.33	9.81	9.87
Chromium	mg/kg	17.4	20.2	17.8	18.9
Lead	mg/kg	618	461	353	239
Selenium	mg/kg	11.1	9.52	7.95	9.57
Silver	mg/kg	1.13 U	1.07 U	1.07 U	1.06 U

ASR Number: 8486

RLAB Approved Sample Analysis Results

03/06/2020

Project ID: YSPMR

Project Desc: Price Metal Refining

Analysis/ Analyte	Units	5-__
1 Percent Solid		
Solids, percent	%	90.0
1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES		
Arsenic	mg/kg	29.5
Barium	mg/kg	167
Cadmium	mg/kg	3.05
Chromium	mg/kg	18.2
Lead	mg/kg	128
Selenium	mg/kg	8.75
Silver	mg/kg	1.16 U